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THE US ARMY YUMA PROVING GROUND, ARIZONA  
22-YEAR CLIMATE CALENDAR  
1954-1975

AD-A166 878

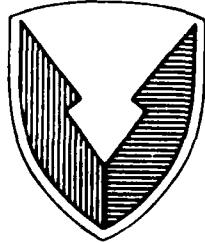
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by

James C. Devine

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U.S. Army Laboratory Command  
**Atmospheric Sciences Laboratory**

White Sands Missile Range, NM 88002-5501

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1. REPORT NUMBER ASL-TR-0200	2. GOVT ACCESSION NO. <b>AD-A166 878</b>	3. RECIPIENT'S CATALOG NUMBER																					
4. TITLE (and Subtitle) THE US ARMY YUMA PROVING GROUND, ARIZONA, 22-YEAR CLIMATE CALENDAR 1954-1975	5. TYPE OF REPORT & PERIOD COVERED Final Technical Report																						
7. AUTHOR(s) James C. Devine	6. PERFORMING ORG. REPORT NUMBER																						
9. PERFORMING ORGANIZATION NAME AND ADDRESS US Army Atmospheric Sciences Laboratory White Sands Missile Range, NM 88002-5501	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS Not applicable																						
11. CONTROLLING OFFICE NAME AND ADDRESS US Army Laboratory Command Adelphi, MD 20783-1145	12. REPORT DATE March 1986																						
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)	13. NUMBER OF PAGES 61																						
15. SECURITY CLASS. (of this report) UNCLASSIFIED																							
15a. DECLASSIFICATION/DOWNGRADING SCHEDULE																							
16. DISTRIBUTION STATEMENT (of this Report)  Approved for public release; distribution is unlimited.																							
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18. SUPPLEMENTARY NOTES  - - - - -																							
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">Weather</td> <td style="width: 25%;">Degree Days,</td> <td style="width: 25%;">Rain,</td> <td style="width: 25%;">Sunrise--Sunset Tables</td> </tr> <tr> <td>Precipitation</td> <td>Trafficability</td> <td>Snow,</td> <td>Climate Calendar.</td> </tr> <tr> <td>Thunderstorms</td> <td>Visibility,</td> <td>Wind</td> <td>Soil Temperature</td> </tr> <tr> <td>Cloudiness,</td> <td>Terrain</td> <td>Relative Humidity</td> <td></td> </tr> <tr> <td>Temperature</td> <td>Climate</td> <td>Atmospheric Pressure</td> <td></td> </tr> </table>				Weather	Degree Days,	Rain,	Sunrise--Sunset Tables	Precipitation	Trafficability	Snow,	Climate Calendar.	Thunderstorms	Visibility,	Wind	Soil Temperature	Cloudiness,	Terrain	Relative Humidity		Temperature	Climate	Atmospheric Pressure	
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Temperature	Climate	Atmospheric Pressure																					
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) <p>This report contains, in calendar form, the following data for the Yuma Proving Ground, AZ: average daily maximum and minimum temperatures, record extremes of these parameters, and years of occurrences; monthly average maximum and minimum temperatures, and average relative humidity; average windspeed in knots; prevailing wind direction; average and maximum precipitation values daily and by month; average sky cover and average number</p>																							

20. ABSTRACT (cont)

of days clear, partly cloudy, and cloudy. Generally all data cover the 1954-1975 period, but a few begin in 1957; and for the seasonal average tables, the period from 20 March 1954 through 19 March 1976 was used.

Tables covering data of interest include: maximum and minimum temperatures, to include total occurrences and percentage of overall occurrence as well as monthly percentages of occurrence; seasonal maximum, minimum, and daily average temperatures; precipitation by monthly occurrence and monthly and annual totals; sky condition; relative humidity; soil temperature; station atmospheric pressure; degree days both heating and cooling; and sunrise-sunset tables.

The general terrain features, climate, trafficability, thunderstorms, and periods of special weather interest are covered in the text and appendix A.

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#### **ACKNOWLEDGMENT**

The author thanks Mr. J. P. Vaughn, Jr., whose publication in 1966 of The Yuma Climate Calendar, TR-ECOM-6016, US Army Electronics Command, US Army Electronics R&D Activity, Fort Huachuca, AZ, provided some of the climatology and terrain information used in this report.

Special thanks must go to all of the individuals who served with the US Army Atmospheric Sciences Laboratory's Yuma Meteorological Team during the period from 1954 through the spring of 1976. It was their dedication to duty and their combined efforts in collecting and recording the meteorological observations during this span of time that have made possible this report.

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## 1. INTRODUCTION

The weather data for this calendar were collected at the Central Meteorological Observatory (CMO) of the US Army Yuma Proving Ground (USAYPG), AZ, which is located 4 mi southeast of the main post. The geographical coordinates of the CMO are 32°50' N and 114°24' W. The station elevation is 324 ft above sea level.

The climatological data cover the period from 1954 through 1975, a data base of 22 yr. Certain parameters were available only from 1957 through 1975; therefore, all tables show the period of record where applicable.

Collection of data for the next calendar update has been initiated. Expected to be published in 1986, the update will contain as much data as possible through calendar year 1985, and hopefully the seasonal period of 21 December 1985 through 19 March 1986.

## 2. CLIMATE

The climate of the USAYPG is generally characterized by clear skies, low relative humidity, uncomfortably warm summers, mild winters, light surface winds, unrestricted visibility, and little precipitation.

Summers, from June to September, are uncomfortably warm, making air conditioning an absolute necessity. As the relative humidity is usually low, evaporative coolers work well here.

Winters are mild, with morning lows generally in the low forties and afternoon maximums in the sixties. In a normal year temperatures do not fall below freezing, except at low elevations along the Colorado River and in depressions below the general ground level. These areas act as receptacles for the densest and coldest air, and hence temperatures are several degrees below those of the surrounding terrain. These areas also have slightly higher daytime temperatures, but the difference is much more noticeable at night.

## 3. TERRAIN

The broad Colorado River, flowing from east to west through the city of Yuma, empties into the Gulf of California 70 mi to the south. Castle Dome Mountains, situated 40 mi to the northeast, and the Gila Mountains, 20 mi to the southeast, are the only significant breaks in this desert plains region. Both ranges have elevations in excess of 3000 ft. The barren sand dunes of the Yuma Desert cover most of the region south of Yuma between the Colorado River and the Gila Mountains, while just 50 mi to the west of Yuma is the fertile Imperial Valley of California.

Excluding the irrigated sections to the west and the Yuma Desert, the prevailing vegetation types in the Yuma region are creosote bush and mesquite at lower elevations on the desert floor with palo verde trees and cacti in the hills.

Trafficability for ground vehicles is excellent at least 95 percent of the time, and aircraft can operate under Visual Flight Rules almost continuously during the entire year.

USAYPG receives about 85 percent of all possible sunshine.

#### 4. TEMPERATURE

Temperatures have been described, and accurately so, as hot in summer and ideal in winter. June, July, August, and September have an average maximum temperature of 100 °F or more with average minimums of 72 to 81 °F. The average maximum temperatures for December and January are 68 and 67 °F and the average minimums are 42 and 41 °F, respectively.

The earliest date reporting 100 °F was 3 April 1957, and the latest date was 24 October 1959 with 102 °F. The highest temperature recorded at USAYPG was 118 °F on 24 June 1957, 31 July 1957, and 9 July 1958. The lowest was 23 °F on 8 January 1971. The city of Yuma reported a low of 22 °F in 1937 and a high of 120 °F in 1910. These two measurements were made at a location 4 mi north of the city airport.

Using increments of 5 °F, tables 1 and 3 present the numerical count and the proportional percentages of occurrence of the maximum and minimum temperatures for each month represented in this 22-yr study. Tables 2 and 4, using the same numerical increments, show the percentage of time that each increment appears during any given month.

Table 5 lists the warmest and coolest average maximum and the warmest and coolest average minimum temperatures for each month of the year and the year of occurrence.

Tables 6 through 8 provide seasonal average maximum, minimum, and daily average temperatures ranked numerically from warmest to coolest.

#### 5. PRECIPITATION

For most years, Yuma, AZ, is the driest major city in the United States. The mean annual precipitation of 3.26 inches is less than the amount received by many towns in southeastern Arizona during a single midsummer month. Yuma lies too far south to benefit from the winter rains brought into the state by storms originating in the North Pacific Ocean and too far west to benefit from the summer rains associated with moist air from the Gulf of Mexico. Most precipitation at USAYPG develops from tropical disturbances in the Pacific Ocean or the Gulf of California.

The only measurable snowfall recorded between 1901 and 1975 in the Yuma area occurred in December 1932 when 1.5 inches fell. No snowfall occurred during the 22 yr of this report.

Precipitation means for winter are very misleading as the means result from a very few wet months (comparably) and many exceptionally dry months. Consider, for example, December, during which the mean was exceeded on the average only once in 3 yr and in the wetter years a measurement equal to or greater than 1.0 inch occurred only once in 7 yr.

The monthly maximum rainfall amounts occurring during the summer months have been generally in the form of showers and thundershowers associated with tropical disturbances in the Pacific Ocean or the Gulf of California.

USAYPG receives measurable precipitation on an average of 18 days a year, with only 8 days recording amounts equal to or exceeding 0.10 inch. The average annual rainfall is 3.26 inches and is almost exclusively rain. According to the means, the wettest months are August, September, October, December, and January. The driest months are May and June. Although climatologically, May is the driest month, in this climatological study of 22 yr, June had 14 yr when not even a trace of rain fell while May counted only 9 yr in that category.

Table 9 lists the monthly totals of precipitation for each of the 22 yr in this report.

Table 10 lists the total number of occurrences of precipitation of 0.00 inches, a trace, and thereafter amounts in increments of 0.25 inch for each month.

## 6. WINDS

Surface winds are light throughout the year, with the average speed being 4 to 5 kn. Average peak winds during fall and winter are 14.3 kn and for spring and summer are 18.7 kn. The prevailing wind direction is from the north-northwest from November through February and from the west to southwest the remainder of the year. The highest surface wind gust recorded at USAYPG was 61.7 kn (71 mph) on 20 March 1970.

## 7. VISIBILITY

Visibility at Yuma is rarely restricted, equaling 10 mi or greater 97 percent of the time. The average number of days per month when visibility can be expected to drop below 7 mi (11.265 km) peaks at 2 days in September. Thereafter, the average number of low visibility days declines to 1.7 in August; 0.8 in July; 0.7 in January, March, October, and November; 0.6 in June and December; and 0.5 in February, April, and May. Restrictions are usually the result of dust, haze, or blowing sand. Fog or precipitation heavy enough to cause a restriction to visibility is rare.

## 8. THUNDERSTORMS

Compared to the South and Midwest, Yuma is relatively free of thunderstorms. On the average, only 3 mo of the year experience more than one thunderstorm. August has an average of 4.4 thunderstorm days, while July and September are

tied with 1.7 days each. October averages 0.8 day; June 0.7; March and May 0.3; April and November 0.2; and January, February, and December have the fewest with 0.1 thunderstorm day in an average month.

## 9. SKY CONDITION

Cloudiness is rare at USAYPG. The annual sky cover (reported in tenths of sky from 0.0 to 1.0) is as follows: clear (0.0 to 0.3) = 67 percent of all hours; partly cloudy (0.3 to 0.7) = 24 percent; and cloudy (0.8 to 1.0) = 9 percent. Most of the cloudiness is in the form of cirriform clouds with bases from 25,000 ft up.

Sky condition data are presented in table 11.

## 10. OTHER METEOROLOGICAL DATA

Relative humidity data appear in table 12, soil temperatures in table 13, atmospheric surface pressure in table 14, and degree days - heating in table 15. Degree days - cooling are in tables 16 through 20. Appendix A contains records and averages of interest. Appendix B provides the monthly sunrise and sunset times, in tables B-1 through B-12, for USAYPG in both hours and minutes and hours and hundredths of hours. The climate calendar is appendix C.

TABLE 1. MAXIMUM TEMPERATURES: TOTAL OCCURRENCES AND OVERALL PERCENTAGE  
YUMA PROVING GROUND, AZ (1954-1975)

MONTH TEMPS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	PERCENT OF MAXIMUMS
40-44	0	0	0	0	0	0	0	0	0	0	0	2	2	0.02
45-49	7	0	0	0	0	0	0	0	0	0	0	4	11	0.14
50-54	17	3	0	0	0	0	0	0	0	0	3	22	45	0.56
55-59	76	23	3	1	0	0	0	0	0	1	5	72	181	2.25
60-64	131	58	32	2	0	0	0	0	0	0	3	27	100	353
65-69	182	127	90	31	1	0	0	0	0	0	11	92	191	725
70-74	160	166	138	64	10	0	0	0	0	0	29	133	188	888
75-79	93	135	123	88	39	0	0	0	0	3	56	159	85	781
80-84	13	71	141	113	64	9	1	0	5	76	132	18	643	8.00
85-89	3	32	101	146	99	39	0	3	27	137	92	0	679	8.45
90-94	0	6	46	136	146	52	9	16	79	161	17	0	668	8.31
95-99	0	0	8	54	177	129	38	53	145	142	0	0	746	9.28
100-104	0	0	0	25	108	173	168	245	220	64	0	0	1003	12.48
105-109	0	0	0	0	34	149	316	285	142	2	0	0	928	11.55
110-114	0	0	0	0	4	91	136	73	39	0	0	0	343	4.27
115-119	0	0	0	0	0	18	14	7	0	0	0	0	39	0.49

TABLE 2. MAXIMUM TEMPERATURES: MONTHLY PERCENTAGE OF OCCURRENCE  
YUMA PROVING GROUND, AZ (1954-1975)

MONTH TEMPS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
40-44	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
45-49	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6
50-54	2.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	3.2
55-59	11.1	3.7	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.8	10.6
60-64	19.2	9.3	4.7	0.3	0.0	0.0	0.0	0.0	0.0	0.4	4.1	14.7
65-69	26.7	20.5	13.2	4.7	0.2	0.0	0.0	0.0	0.0	1.6	13.9	28.0
70-74	23.5	26.7	20.2	9.7	1.5	0.0	0.0	0.0	0.0	4.3	20.2	27.6
75-79	13.6	21.7	18.0	13.3	5.7	0.0	0.0	0.0	0.5	8.2	24.1	12.5
80-84	1.9	11.4	20.7	17.1	9.4	1.4	0.2	0.0	0.8	11.1	20.0	2.6
85-89	0.4	5.2	14.8	22.1	14.5	5.9	0.0	0.4	4.1	20.1	13.9	0.0
90-94	0.0	1.0	6.7	20.6	21.4	7.9	1.3	2.4	12.0	23.6	2.6	0.0
95-99	0.0	0.0	1.2	8.2	26.0	19.6	5.6	7.8	22.0	20.8	0.0	0.0
100-104	0.0	0.0	0.0	3.8	15.8	26.2	24.6	35.9	33.3	9.4	0.0	0.0
105-109	0.0	0.0	0.0	0.0	5.0	22.6	46.3	41.8	21.5	0.3	0.0	0.0
110-114	0.0	0.0	0.0	0.0	0.6	13.8	19.9	10.7	5.9	0.0	0.0	0.0
115-119	0.0	0.0	0.0	0.0	0.0	2.7	2.1	1.0	0.0	0.0	0.0	0.0

TABLE 3. MINIMUM TEMPERATURES: TOTAL OCCURRENCES AND OVERALL PERCENTAGE  
YUMA PROVING GROUND, AZ (1954-1975)

MONTH TEMPS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	PERCENT OF MINIMUMS	
20-24	2	0	0	0	0	0	0	0	0	0	0	0	2	0.02	
25-29	21	4	0	0	0	0	0	0	0	0	0	5	30	0.37	
30-34	67	14	3	0	0	0	0	0	0	0	3	53	140	1.74	
35-39	179	77	21	0	0	0	0	0	0	2	23	158	460	5.72	
40-44	182	173	88	14	0	0	0	0	0	4	122	236	819	10.19	
45-49	165	176	201	73	5	0	0	0	0	0	23	186	162	991	12.33
50-54	51	123	217	170	37	1	0	0	0	0	69	186	54	908	11.30
55-59	15	45	121	212	117	9	0	0	0	6	164	111	11	811	10.09
60-64	0	9	31	144	206	67	0	0	0	42	197	29	2	727	9.04
65-69	0	0	0	46	207	163	11	16	138	150	0	1	732	9.11	
70-74	0	0	0	1	83	183	51	72	170	62	0	0	622	7.74	
75-79	0	0	0	0	24	149	172	184	174	11	0	0	714	8.89	
80-84	0	0	0	0	3	81	319	311	117	0	0	0	831	10.34	
85-89	0	0	0	0	0	7	125	96	12	0	0	0	240	2.99	
90-94	0	0	0	0	0	0	4	3	1	0	0	0	8	0.10	

TABLE 4. MINIMUM TEMPERATURES: MONTHLY PERCENTAGE OF OCCURRENCE  
YUMA PROVING GROUND, AZ (1954-1975)

MONTH TEMPS	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
20-24	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25-29	3.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
30-34	9.8	2.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	7.8
35-39	26.2	12.4	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	3.5	23.2
40-44	26.7	27.9	12.9	2.1	0.0	0.0	0.0	0.0	0.0	0.6	18.5	34.6
45-49	24.2	28.3	29.5	11.1	0.7	0.0	0.0	0.0	0.0	3.4	28.2	23.8
50-54	7.5	19.8	31.8	25.8	5.4	0.2	0.0	0.0	0.0	10.1	28.2	7.9
55-59	2.2	7.2	17.7	32.1	17.2	1.4	0.0	0.0	0.9	24.1	16.8	1.6
60-64	0.0	1.5	4.6	21.8	30.2	10.2	0.0	0.0	6.4	28.9	4.4	0.3
65-69	0.0	0.0	0.0	7.0	30.4	24.7	1.6	2.4	20.9	22.0	0.0	0.2
70-74	0.0	0.0	0.0	0.2	12.2	27.7	7.5	10.6	25.8	9.1	0.0	0.0
75-79	0.0	0.0	0.0	0.0	3.5	22.6	25.2	27.0	26.4	1.6	0.0	0.0
80-84	0.0	0.0	0.0	0.0	0.4	12.3	46.8	45.6	17.7	0.0	0.0	0.0
85-89	0.0	0.0	0.0	0.0	0.0	1.1	18.3	14.1	1.8	0.0	0.0	0.0
90-94	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.4	0.2	0.0	0.0	0.0

TABLE 5. AVERAGE MAXIMUM AND MINIMUM TEMPERATURES BY MONTH  
 WARMEST AND COOLEST  
 (PERIOD OF RECORD: 1954 - 1975)  
 YUMA PROVING GROUND, AZ

	MAXIMUM		MINIMUM	
	WARMEST	COOLEST	WARMEST	COOLEST
JAN	72.3 - 1959	60.7 - 1955	48.0 - 1969	35.9 - 1964
FEB	80.9 - 1954	66.9 - 1966	52.5 - 1968	39.1 - 1956
MAR	87.5 - 1972	70.5 - 1973	55.6 - 1972	45.9 - 1962
APR	92.6 - 1954	75.9 - 1967	60.7 - 1959	50.7 - 1975
MAY	99.5 - 1958	86.9 - 1971	68.9 - 1958	59.9 - 1962
JUN	107.3 - 1974	95.7 - 1965	75.8 - 1960	65.9 - 1965
JUL	108.8 - 1957	102.4 - 1955	83.5 - 1959	77.9 - 1962
AUG	108.3 - 1969	101.2 - 1971	84.5 - 1969	76.9 - 1974
SEP	107.1 - 1956	96.3 - 1967	77.7 - 1956	69.2 - 1973
OCT	95.3 - 1965	81.1 - 1972	66.5 - 1964	57.9 - 1971
NOV	81.8 - 1954	71.5 - 1957	53.9 - 1967	45.3 - 1956
DEC	75.1 - 1958	61.9 - 1967	45.1 - 1962	37.5 - 1968

TABLE 6. AVERAGE MAXIMUM TEMPERATURES BY SEASON  
 21 MARCH 1954 THROUGH 20 MARCH 1976  
 (Ranked from warmest to coldest)  
 YUMA PROVING GROUND, AZ

	SPRING 21MAR-20JUN YR (Deg)F	SUMMER 21JUN-20SEP YR (Deg)F	AUTUMN 21SEP-20DEC YR (Deg)F	WINTER 21DEC-20MAR YR (Deg)F
1	60 - 93. 22	62 - 107. 54	54 - 85. 12	(71-72) - 75. 34
2	59 - 93. 02	60 - 106. 83	62 - 84. 69	(60-61) - 74. 12
3	54 - 92. 96	58 - 106. 37	58 - 84. 64	(58-59) - 73. 33
4	66 - 92. 68	56 - 106. 04	56 - 83. 09	(56-57) - 72. 17
5	74 - 92. 51	57 - 105. 41	66 - 82. 85	(75-76) - 71. 67
6	58 - 91. 99	54 - 105. 24	63 - 82. 65	(55-56) - 71. 56
7	68 - 91. 87	69 - 105. 16	59 - 82. 58	(66-67) - 71. 50
8	62 - 91. 74	74 - 105. 11	55 - 82. 55	(70-71) - 71. 26
9	56 - 91. 67	75 - 105. 00	73 - 82. 44	(73-74) - 71. 18
10	72 - 91. 34	*70 - 104. 93	65 - 82. 38	(57-58) - 70. 91
11	61 - 91. 23	*73 - 104. 93	75 - 82. 32	(67-68) - 70. 87
12	69 - 91. 07	59 - 104. 92	74 - 81. 99	(62-63) - 70. 56
13	73 - 89. 96	64 - 104. 40	67 - 81. 75	(69-70) - 70. 16
14	57 - 89. 28	66 - 104. 15	68 - 81. 25	(74-75) - 70. 10
15	63 - 89. 02	63 - 104. 02	60 - 81. 09	(64-65) - 69. 98
16	70 - 88. 72	61 - 104. 01	64 - 80. 51	(61-62) - 69. 20
17	55 - 88. 68	71 - 103. 74	70 - 80. 03	(63-64) - 68. 78
18	64 - 88. 85	72 - 103. 68	69 - 79. 84	(59-60) - 68. 60
19	71 - 88. 23	67 - 103. 67	57 - 79. 01	(68-69) - 68. 20
20	65 - 87. 21	68 - 103. 08	61 - 78. 69	(72-73) - 68. 07
21	75 - 86. 61	55 - 102. 78	72 - 75. 71	(65-66) - 67. 67
22	67 - 85. 55	65 - 102. 60	71 - 75. 63	(54-55) - 66. 58
AVG	90. 32	104. 71	81. 40	70. 54
HIGHEST	93. 22	107. 54	85. 12	75. 34
LOWEST	85. 55	102. 60	75. 63	66. 58
RANGE	7. 67	4. 94	9. 49	8. 76

NOTE: \* - Tie position to nearest hundredths.

TABLE 7. AVERAGE MINIMUM TEMPERATURES BY SEASON  
 21 MARCH 1954 THROUGH 20 MARCH 1976  
 (Ranked from warmest to coldest)  
 YUMA PROVING GROUND, AZ

	SPRING 21MAR-20JUN YR (Deg)F	SUMMER 21JUN-20SEP YR (Deg)F	AUTUMN 21SEP-20DEC YR (Deg)F	WINTER 21DEC-20MAR YR (Deg)F
1	66 - 64.08	70 - 81.02	54 - 56.75	(67-68) - 47.82
2	58 - 63.50	69 - 80.90	63 - 56.21	(56-57) - 47.58
3	60 - 63.38	71 - 80.55	*65 - 56.12	(64-65) - 45.79
4	59 - 63.02	67 - 80.49	*67 - 56.12	(69-70) - 45.71
5	72 - 62.92	59 - 79.65	66 - 55.86	(57-58) - 45.40
6	56 - 62.88	58 - 79.51	62 - 55.79	(60-61) - 45.39
7	69 - 62.50	66 - 79.50	69 - 55.40	(75-76) - 45.22
8	54 - 62.07	60 - 79.41	58 - 55.37	(71-72) - 44.70
9	68 - 61.89	57 - 78.91	55 - 55.01	(68-69) - 44.57
10	74 - 61.68	56 - 78.89	64 - 54.62	(61-62) - 44.36
11	63 - 61.34	55 - 78.78	59 - 54.57	(62-63) - 44.33
12	*57 - 61.03	63 - 78.60	74 - 54.32	(58-59) - 44.20
13	*61 - 61.03	62 - 78.48	57 - 54.22	(73-74) - 44.11
14	65 - 60.65	64 - 78.46	70 - 53.45	(72-73) - 44.02
15	73 - 60.59	54 - 78.28	68 - 53.08	(59-60) - 43.82
16	*55 - 60.36	74 - 78.18	60 - 53.03	(66-67) - 43.63
17	*70 - 60.36	61 - 77.95	56 - 52.80	(55-56) - 43.33
18	71 - 59.86	72 - 77.88	72 - 52.79	(65-66) - 43.32
19	62 - 59.76	68 - 77.59	73 - 52.56	(54-55) - 43.00
20	67 - 58.91	65 - 77.03	75 - 52.55	(70-71) - 42.72
21	64 - 58.85	73 - 76.96	61 - 51.99	(74-75) - 41.87
22	75 - 58.15	75 - 76.89	71 - 50.54	(63-64) - 40.14
AVG	61.31	78.81	54.23	44.32
HIGHEST	64.08	81.02	56.75	47.82
LOWEST	58.15	76.89	50.54	40.14
RANGE	5.93	4.13	6.21	7.68

NOTE: \* - Tie position to nearest hundredths.

TABLE 8. DAILY AVERAGE TEMPERATURES BY SEASON  
 21 MARCH 1954 THROUGH 20 MARCH 1976  
 (Ranked from warmest to coldest)  
 YUMA PROVING GROUND, AZ

	SPRING 21MAR-20JUN YR (Deg)F	SUMMER 21JUN-20SEP YR (Deg)F	AUTUMN 21SEP-20DEC YR (Deg)F	WINTER 21DEC-20MAR YR (Deg)F
1	66 - 78. 38	60 - 93. 12	54 - 70. 93	(71-72) - 60. 02
2	60 - 78. 30	69 - 93. 03	62 - 70. 24	(56-57) - 59. 87
3	59 - 78. 02	62 - 93. 01	58 - 70. 01	(60-61) - 59. 76
4	58 - 77. 74	70 - 92. 98	63 - 69. 43	(67-68) - 59. 35
5	54 - 77. 51	58 - 92. 94	66 - 69. 35	(58-59) - 58. 77
6	56 - 77. 28	56 - 92. 47	65 - 69. 25	(75-76) - 58. 45
7	72 - 77. 13	59 - 92. 29	67 - 68. 93	(57-58) - 58. 16
8	74 - 77. 10	57 - 92. 16	55 - 68. 78	(69-70) - 57. 93
9	68 - 76. 88	71 - 92. 15	59 - 68. 58	(64-65) - 57. 88
10	69 - 76. 78	67 - 92. 08	74 - 68. 15	(73-74) - 57. 64
11	61 - 76. 13	66 - 91. 83	56 - 67. 95	(66-67) - 57. 57
12	62 - 75. 75	54 - 91. 76	69 - 67. 62	(55-56) - 57. 45
13	73 - 75. 27	74 - 91. 65	64 - 67. 56	(62-63) - 57. 44
14	63 - 75. 18	64 - 91. 43	73 - 67. 50	(70-71) - 56. 99
15	57 - 75. 16	63 - 91. 31	75 - 67. 43	(61-62) - 56. 78
16	70 - 74. 54	61 - 90. 98	68 - 67. 16	(68-69) - 56. 38
17	55 - 74. 52	*73 - 90. 95	60 - 67. 06	(59-60) - 56. 21
18	71 - 74. 04	*75 - 90. 95	70 - 66. 74	(72-73) - 56. 04
19	65 - 73. 93	#55 - 90. 78	57 - 66. 62	(74-75) - 55. 98
20	64 - 73. 70	#72 - 90. 78	61 - 65. 34	(65-66) - 55. 49
21	75 - 72. 38	68 - 90. 33	72 - 64. 25	(54-55) - 54. 79
22	67 - 72. 23	65 - 89. 82	71 - 63. 08	(63-64) - 54. 46
Avg	75. 82	91. 76	67. 82	57. 43
HIGHEST	78. 38	93. 12	70. 93	60. 02
LOWEST	72. 23	89. 82	63. 08	54. 46
RANGE	6. 15	3. 30	7. 85	5. 56

NOTE: \* - Tie position to nearest hundredths.  
 # - Second of two consecutive tie positions.

TABLE 9. PRECIPITATION: MONTHLY AND ANNUAL TOTALS  
YUMA PROVING GROUND, AZ (1954-1975)

YR/MO	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1954	0.31	0.07	0.35	0.00	0.00	T	0.19	0.11	0.24	0.00	0.08	T	1.35
1955	*1.55	0.02	0.00	0.03	0.00	0.00	0.58	*2.19	0.00	0.00	T	0.05	4.42
1956	0.05	0.02	0.00	0.00	T	T	0.14	0.00	T	T	0.00	T	0.21
1957	0.61	0.05	0.21	0.22	T	0.00	T	0.33	0.00	1.89	T	0.07	3.38
1958	T	*2.41	0.28	0.04	*0.19	0.17	*1.52	0.71	T	0.33	T	0.00	5.65
1959	0.09	0.23	0.03	T	0.01	T	0.03	1.25	0.18	0.05	0.02	1.55	3.44
1960	0.95	0.18	0.16	0.00	0.03	T	T	T	0.79	T	0.04	0.03	2.18
1961	0.23	0.00	T	T	0.00	0.00	T	1.20	0.15	T	0.03	1.50	3.11
1962	0.76	0.17	0.13	0.00	0.00	0.00	T	0.02	0.11	T	0.12	0.66	1.97
1963	0.48	0.12	0.22	0.05	T	T	T	0.13	2.06	1.17	0.10	0.00	4.33
1964	T	0.14	0.04	0.03	T	0.00	0.04	0.07	0.01	0.08	0.22	0.10	0.73
1965	0.66	0.52	0.09	*1.89	0.00	0.00	0.11	0.03	T	0.00	0.99	*2.11	*6.40
1966	0.66	0.47	0.44	0.00	T	T	0.27	0.14	0.27	1.61	0.10	0.04	4.00
1967	0.41	0.00	0.12	0.02	T	0.00	T	0.89	*2.21	T	0.89	0.89	5.43
1968	0.09	0.54	0.06	0.05	0.00	0.00	0.37	T	0.00	0.03	T	0.07	1.21
1969	1.07	0.04	0.11	T	0.05	0.00	0.14	0.04	0.41	0.04	*1.73	0.32	3.95
1970	T	0.95	*1.38	T	0.00	0.00	0.02	0.57	0.11	0.08	0.00	0.22	3.33
1971	T	0.07	0.00	0.63	0.03	0.00	T	0.22	1.41	0.01	0.00	0.10	2.47
1972	0.00	0.00	0.00	T	T	*1.31	T	0.24	T	*3.78	0.12	0.07	5.52
1973	T	0.71	1.11	0.00	0.03	0.00	0.01	1.62	0.00	0.00	0.22	0.00	3.70
1974	0.74	0.00	0.13	0.00	0.00	0.00	0.12	0.04	0.29	0.26	0.00	0.18	1.76
1975	0.15	0.05	0.28	0.39	0.00	0.00	0.12	0.14	1.45	0.00	0.17	0.40	3.15
<b>TOTAL</b>	<b>8.81</b>	<b>6.76</b>	<b>5.14</b>	<b>3.35</b>	<b>0.34</b>	<b>1.48</b>	<b>3.66</b>	<b>*9.94</b>	<b>9.69</b>	<b>9.33</b>	<b>4.83</b>	<b>8.36</b>	<b>71.69</b>
AVG.	0.40	0.31	0.23	0.15	0.02	0.07	0.17	0.45	0.44	0.42	0.22	0.38	3.26
NOTE:	* = Maximum for month or column during this period of record.												

TABLE 10. PRECIPITATION: MONTHLY OCCURRENCES BY INTERVALS  
 (PERIOD OF RECORD: 1954 - 1975)  
 YUMA PROVING GROUND, AZ

INCHES OF PRECIP	JA	FB	MR	AP	MY	JN	JY	AU	SE	OC	NO	DE	TOT.
0. 00	1	4	4	7	9	14	0	1	4	5	4	3	56
TRACE	5	0	1	5	7	6	8	2	4	5	4	2	49
0. 01-0. 25	5	12	11	7	6	1	10	11	6	6	11	10	96
0. 26-0. 50	3	1	4	1	0	0	2	1	3	2	0	2	19
0. 51-0. 75	5	3	0	1	0	0	1	2	0	0	0	1	13
0. 76-1. 00	1	1	0	0	0	0	0	1	1	0	2	1	7
1. 01-1. 25	1	0	1	0	0	0	0	2	0	1	0	0	5
1. 26-1. 50	0	0	1	0	0	1	0	0	2	0	0	1	5
1. 51-1. 75	1	0	0	0	0	0	1	1	0	1	1	1	6
1. 76-2. 00	0	0	0	1	0	0	0	0	0	1	0	0	2
2. 01-2. 25	0	0	0	0	0	0	0	1	2	0	0	1	4
2. 26-2. 50	0	1	0	0	0	0	0	0	0	0	0	0	1
-----													
3. 76-4. 00	0	0	0	0	0	0	0	0	0	1	0	0	1
TOTAL	22	22	22	22	22	22	22	22	22	22	22	22	264

NOTE: Figures under each monthly column are the total number of years of occurrence.

TABLE 11. SKY CONDITION: ANNUAL NUMBER OF DAYS  
 (PERIOD OF RECORD: 1957 - 1975)  
 YUMA PROVING GROUND, AZ

Condition		Clear		Partly	Cloudy		Cloudy		Total
Year		Days	Pct	Days	Pct	Days	Pct	Days	
1957	#209	57.26		89	24.38	*67	18.36	365	
1958	259	70.96		69	18.90	37	10.14	365	
1959	238	65.21		80	21.92	47	12.88	365	
1960	236	64.48		81	22.13	49	13.39	366	
1961	243	66.58		68	18.63	54	14.79	365	
1962	241	66.03		73	20.00	51	13.97	365	
1963	233	63.84		88	24.11	44	12.05	365	
1964	249	68.03		91	24.86	26	7.10	366	
1965	235	64.38		65	26.03	35	9.59	365	
1966	252	69.04		94	25.75	19	5.21	365	
1967	230	63.01		100	27.40	35	9.59	365	
1968	252	68.85		83	22.68	31	8.47	366	
1969	242	66.30		88	24.11	35	9.59	365	
1970	229	62.74		*108	29.59	28	7.67	365	
1971	257	70.41		95	26.03	13	3.56	365	
1972	243	66.39		97	26.50	26	7.10	366	
1973	274	75.07		82	22.47	* 9	2.47	365	
1974	262	71.78		88	24.11	15	4.11	365	
1975	*284	77.81		# 67	18.36	14	3.84	365	
TOTAL	4668			1636		635		6939	
AVG	264	67.27		86	23.58	33	9.15	---	

\* - Maximum occurrence per category.

# - Minimum occurrence per category.

TABLE 12. RELATIVE HUMIDITY IN PERCENT  
 (PERIOD OF RECORD: 1954 - 1975)  
 YUMA PROVING GROUND, AZ

Month	Average Maximum	Average Minimum	Average
JAN	62	23	41
FEB	57	19	37
MAR	50	16	30
APR	42	13	26
MAY	41	12	26
JUN	41	12	26
JUL	49	19	34
AUG	57	22	40
SEP	52	18	35
OCT	52	18	34
NOV	54	20	38
DEC	59	24	42
ANNUAL AVG	52	18	34

TABLE 13. SOIL TEMPERATURE IN DEGREES FAHRENHEIT  
 (PERIOD OF RECORD: 1954 - 1975)  
 YUMA PROVING GROUND, AZ

Month	Average Max	Average Min	Highest	Lowest
JAN	81	40	107	#18
FEB	91	44	118	22
MAR	103	50	131	26
APR	116	56	147	38
MAY	128	64	152	46
JUN	137	73	158	55
JUL	141	83	*160	*63
AUG	138	82	157	62
SEP	130	75	150	55
OCT	113	61	138	33
NOV	94	49	119	30
DEC	80	42	#100	25
ANNUAL AVG	113	60		

\* = Highest temperature in that column  
 # = Lowest temperature in that column

TABLE 14. STATION PRESSURE IN MILLIBARS  
 (PERIOD OF RECORD: 1957 - 1975)  
 YUMA PROVING GROUND, AZ

Month	Avg Max	Avg Min	Average	Highest	Lowest
JAN	1009.1	1004.2	1006.2	1022.7	988.0
FEB	1007.3	1002.0	1004.3	1020.9	988.8
MAR	1004.8	1000.2	1001.9	1021.0	986.6
APR	1002.7	998.0	1000.0	1013.1	986.8
MAY	1000.1	995.7	997.8	1012.4	987.8
JUN	998.0	993.7	995.7	#1005.2	985.4
JUL	999.2	994.7	996.9	1007.0	988.0
AUG	999.5	994.9	997.0	1006.4	987.2
SEP	999.3	995.0	997.0	1008.0	#983.7
OCT	1002.6	998.3	1000.1	1013.2	986.3
NOV	1006.4	1002.0	1003.9	*1023.8	*989.5
DEC	1008.6	1003.5	1005.7	1022.7	988.3
ANNUAL AVG	1003.1	998.5	1000.5		

\* = Highest pressure in that column

# = Lowest pressure in that column

TABLE 15. DEGREE DAYS - HEATING, BASE 65 DEGREES FAHRENHEIT  
 22-YEAR AVERAGE (1954-1975)  
 YUMA PROVING GROUND, AZ

Month Date	Nov	Dec	Jan	Feb	Mar (Non-leap year)	Mar (Leap year)
1	0	89	408	737	894	897
2	0	95	422	745	898	901
3	0	101	436	753	902	905
4	0	108	451	760	907	910
5	0	115	465	767	911	914
6	0	123	478	773	915	918
7	0	131	490	779	918	921
8	0	141	503	786	920	923
9	0	150	515	790	922	925
10	0	160	526	796	925	928
11	0	170	538	801	928	931
12	0	181	550	806	931	934
13	0	192	561	812	934	937
14	2	204	572	818	936	939
15	5	216	582	824	938	941
16	9	227	590	830	939	942
17	14	238	598	836	940	943
18	20	249	607	843	941	944
19	26	259	616	849	942	945
20	31	269	625	855	---	---
21	36	280	635	860		
22	41	290	646	866		
23	46	300	656	871		
24	50	310	666	876		
25	54	320	676	880		
26	58	331	685	883		
27	63	343	694	887		
28	69	355	703	891		
29	75	368	712	*894		
30	82	381	721	---		
31	--	395	729	---		

\* = Leap year. See effect on March.

TABLE 16. DEGREE DAYS - COOLING, BASE 65 DEGREES FAHRENHEIT  
 22-YEAR AVERAGE (1954-1975)  
 YUMA PROVING GROUND, AZ

Date	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
1	0	20	187	611	1282	2167	3008	3663	3986
2	0	21	197	630	1309	2196	3033	3680	3970
3	0	23	207	649	1337	2225	3058	3696	3972
4	0	26	216	668	1365	2253	3083	3711	3974
5	0	31	225	687	1392	2281	3108	3725	3976
6	0	57	280	777	1533	2423	3238	3792	3984
7	0	41	245	725	1446	2337	3158	3753	3981
8	0	46	256	743	1474	2365	3184	3766	3982
9	0	51	268	760	1503	2394	3211	3779	3983
10	0	57	280	777	1533	2423	3238	3792	3984
11	0	62	293	795	1562	2451	3264	3804	3985
12	0	67	305	815	1591	2479	3290	3816	3986
13	0	73	318	836	1620	2508	3314	3828	----
14	0	79	331	857	1649	2535	3337	3841	
15	0	85	344	878	1678	2562	3359	3852	
16	0	92	359	900	1707	2589	3381	3862	
17	0	99	375	923	1735	2615	3402	3872	
18	0	104	392	947	1764	2642	3422	3881	
19	0	108	408	971	1793	2668	3441	3890	
20	1	113	424	996	1822	2694	3459	3899	
21	2	118	438	1022	1851	2720	3478	3907	
22	2	123	452	1048	1879	2746	3496	3916	
23	2	129	466	1074	1908	2772	3514	3924	
24	2	135	481	1100	1937	2799	3533	3931	
25	3	141	496	1126	1966	2826	3552	3937	
26	5	147	512	1151	1995	2853	3571	3943	
27	8	153	528	1177	2024	2879	3590	3950	
28	10	160	544	1203	2053	2906	3609	3956	
29	12	168	561	1229	2081	2933	3628	3961	
30	15	177	578	1255	2109	2959	3646	3964	
31	18	---	594	----	2138	2984	----	3966	

TABLE 17. DEGREE DAYS - COOLING, BASE 70 DEGREES FAHRENHEIT  
 22-YEAR AVERAGE (1954-1975)  
 YUMA PROVING GROUND, AZ

Date	Apr	May	Jun	Jul	Aug	Sep	Oct
1	0	27	296	817	1547	2233	2738
2	0	32	310	839	1571	2253	2750
3	0	37	324	862	1595	2273	2761
4	0	41	338	885	1618	2293	2771
5	0	45	352	907	1641	2313	2780
6	0	50	366	929	1664	2333	2789
7	0	55	380	951	1687	2353	2798
8	0	61	393	974	1710	2374	2806
9	0	68	405	998	1734	2396	2814
10	1	75	417	1023	1758	2418	2822
11	1	83	430	1047	1781	2439	2829
12	1	90	445	1071	1804	2460	2836
13	2	98	461	1095	1828	2479	2843
14	3	106	477	1119	1850	2497	2851
15	4	114	493	1143	1872	2514	2857
16	6	124	510	1167	1894	2531	2862
17	8	135	528	1190	1915	2547	2867
18	8	147	547	1214	1937	2562	2871
19	8	158	566	1238	1958	2576	2875
20	8	169	586	1262	1979	2589	2879
21	8	178	607	1286	2000	2603	2882
22	8	187	628	1309	2021	2616	2886
23	9	196	649	1333	2042	2629	2889
24	10	206	670	1357	2064	2643	2891
25	11	216	691	1381	2086	2657	2892
26	12	227	711	1405	2108	2671	2893
27	13	238	732	1429	2129	2685	2895
28	15	249	753	1453	2151	2699	2896
29	18	261	774	1476	2173	2713	-----
30	22	273	795	1499	2194	2726	-----
31	--	284	---	1523	2214	-----	-----

TABLE 18. DEGREE DAYS - COOLING, BASE 75 DEGREES FAHRENHEIT  
 22-YEAR AVERAGE (1954-1975)  
 YUMA PROVING GROUND, AZ

Date	May	Jun	Jul	Aug	Sep	Oct
1	0	116	487	1062	1593	1948
2	0	125	504	1081	1608	1955
3	0	134	522	1100	1623	1961
4	0	143	540	1118	1638	1966
5	0	152	557	1136	1653	1970
6	0	161	574	1154	1668	1974
7	0	170	591	1172	1683	1978
8	1	178	609	1190	1699	1981
9	3	185	628	1209	1716	1984
10	5	192	648	1228	1733	1987
11	8	200	667	1246	1749	1989
12	10	210	686	1264	1765	1991
13	13	221	705	1283	1779	1993
14	16	232	724	1300	1792	1996
15	19	243	743	1317	1804	1997
16	24	255	762	1334	1816	----
17	30	268	780	1350	1827	
18	37	282	799	1367	1834	
19	43	296	818	1383	1846	
20	49	311	837	1399	1854	
21	53	327	856	1415	1863	
22	57	343	874	1431	1871	
23	61	359	893	1447	1879	
24	66	375	912	1464	1888	
25	71	391	931	1481	1897	
26	77	406	950	1498	1906	
27	83	422	969	1514	1915	
28	89	438	988	1531	1924	
29	96	454	1006	1548	1933	
30	103	470	1024	1564	1941	
31	109	---	1043	1579	----	

TABLE 19. DEGREE DAYS - COOLING, BASE 80 DEGREES FAHRENHEIT  
 22-YEAR AVERAGE (1954-1975)  
 YUMA PROVING GROUND, AZ

Date	May	Jun	Jul	Aug	Sep	Oct
1	0	15	236	656	1032	1237
2	0	19	248	670	1042	1239
3	0	23	261	684	1052	1240
4	0	27	274	697	1062	----
5	0	31	286	710	1072	
6	0	35	298	723	1082	
7	0	39	310	736	1092	
8	0	42	323	749	1103	
9	0	44	337	763	1115	
10	0	46	352	777	1127	
11	0	49	366	790	1138	
12	0	54	380	803	1149	
13	0	60	394	817	1158	
14	0	66	408	829	1166	
15	0	72	422	841	1173	
16	0	79	436	853	1180	
17	1	87	449	864	1186	
18	3	96	463	876	1191	
19	4	105	477	887	1195	
20	5	115	491	898	1198	
21	5	126	505	909	1202	
22	5	137	518	920	1205	
23	5	148	532	931	1208	
24	5	159	546	943	1212	
25	5	170	560	955	1216	
26	6	180	574	967	1220	
27	7	191	588	978	1224	
28	8	202	602	990	1228	
29	10	213	615	1002	1232	
30	12	224	628	1013	1235	
31	13	---	642	1023	----	

TABLE 20. DEGREE DAYS - COOLING, BASE 85 DEGREES FAHRENHEIT  
 22-YEAR AVERAGE (1954-1975)  
 YUMA PROVING GROUND, AZ

Date	Jun	Jul	Aug	Sep
1	0	87	352	573
2	0	94	361	578
3	0	102	370	583
4	0	110	378	588
5	0	117	386	593
6	0	124	394	598
7	0	131	402	603
8	0	139	410	609
9	0	148	419	616
10	0	158	428	623
11	0	167	436	629
12	0	176	444	635
13	1	185	453	639
14	2	194	460	642
15	3	203	467	644
16	5	212	474	646
17	8	220	480	647
18	12	229	487	---
19	16	238	493	
20	21	247	499	
21	27	256	505	
22	33	265	511	
23	39	273	517	
24	45	282	524	
25	51	291	531	
26	56	300	538	
27	62	309	544	
28	68	318	551	
29	74	326	558	
30	80	334	564	
31	--	343	569	

APPENDIX A. RECORDS AND AVERAGES OF INTEREST  
US ARMY YUMA PROVING GROUND, ARIZONA

**PRECIPITATION**

Wettest year	1965	6.40 IN
Driest year	1956	0.21 IN
Wettest month	OCT	1972
Maximum in 24 hours	6 OCT	1972
Month with the highest average rainfall	AUG	0.45 IN
Month with the lowest average rainfall	MAY	0.02 IN

**SKY CONDITION**

Most clear days	1975	284
Fewest clear days	1957	209
Most partly cloudy days	1970	108
Fewest partly cloudy days	1975	67
Most cloudy days	1957	67
Fewest cloudy days	1973	9

**ANNUAL AVERAGE SKY CONDITION DAYS**

Cloudy	33	9.15%
Partly cloudy	86	23.58%
Clear	246	67.27%

**TEMPERATURES**

Maximum - highest annual	1954	89.45
Maximum - lowest annual	1971	84.93
Minimum - highest annual	1969	61.24
Minimum - lowest annual	1975	57.67
Highest - any day	1957, 57, 58	118
Lowest - any day	1971	23
Daily average maximum		86.87
Daily average minimum		59.83

Maximum temperatures (Same calendar year)

	= or >100	= or >105	= or >110	= or >115
Earliest date	3 Apr 61	5 May 58	11 May 60	14 Jun 61
Latest date	24 Oct 59	12 Oct 65	26 Sep 56	29 Aug 54

Minimum temperatures (From autumn through spring)

	= or < 32	= or < 30	= or < 25
Earliest date	17 Nov 58	12 Dec 71; 72	3 Jan 74
Latest date	13 Mar 56	28 Feb 62	12 Jan 62

CONSECUTIVE DAYS:

Maximum equal to or greater than 100 degrees (25 Jul through 1 Oct 56 and 10 Jun through 20 Aug 60)	72
Maximum equal to or greater than 105 degrees (18 Jun through 15 Jul 57 and 12 Jun through 9 Jul 60)	28
Maximum equal to or greater than 110 degrees (1 through 10 Aug 75)	10
Maximum equal to or greater than 115 degrees (8 through 11 Jul 58 and 19 through 22 Jun 60)	4

THUNDERSTORMS (Average number of days)

December through February	1
March through May	1
June through August	7
September through November	3

SURFACE PRESSURE (Period of record: 1957 - 1975)

Highest	1023.8 mbar
Lowest	983.7 mbar

MAXIMUM WIND GUST (Period of record: 1957 - 1975)

20 March 1970	71 mi/h
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APPENDIX B. SUNRISE AND SUNSET TABLES  
US ARMY YUMA PROVING GROUND, ARIZONA

Tables include hours and minutes of daylight. These values are also shown in hours and hundreds of hours under the column headed by X.

All times shown are local standard time.

TABLE B-1. SUNRISE AND SUNSET TABLES: JANUARY  
US ARMY YUMA PROVING GROUND, ARIZONA

Day	Sunrise	Sunset	Daylight Hr	X Min
1	0740	1743	10 03	10. 05
2	0740	1744	10 04	10. 07
3	0740	1745	10 05	10. 08
4	0741	1746	10 05	10. 08
5	0741	1746	10 05	10. 08
6	0741	1747	10 06	10. 10
7	0741	1748	10 07	10. 12
8	0741	1749	10 08	10. 13
9	0741	1750	10 09	10. 15
10	0741	1751	10 10	10. 17
11	0741	1751	10 10	10. 17
12	0741	1752	10 11	10. 18
13	0741	1753	10 12	10. 20
14	0740	1754	10 14	10. 23
15	0740	1755	10 15	10. 25
16	0740	1756	10 16	10. 27
17	0740	1757	10 19	10. 28
18	0739	1758	10 19	10. 32
19	0739	1759	10 20	10. 33
20	0739	1800	10 21	10. 35
21	0738	1801	10 23	10. 38
22	0738	1802	10 24	10. 40
23	0738	1803	10 25	10. 42
24	0737	1803	10 26	10. 43
25	0737	1804	10 27	10. 45
26	0736	1805	10 29	10. 48
27	0736	1806	10 30	10. 50
28	0735	1807	10 32	10. 53
29	0735	1808	10 33	10. 55
30	0734	1809	10 35	10. 58
31	0734	1810	10 36	10. 60

TABLE B-2. SUNRISE AND SUNSET TABLES: FEBRUARY  
US ARMY YUMA PROVING GROUND, ARIZONA

Day	Sunrise	Sunset	Daylight Hr	X Min
1	0733	1811	10 38	10.63
2	0732	1812	10 40	10.67
3	0732	1813	10 41	10.68
4	0731	1814	10 43	10.72
5	0730	1814	10 44	10.73
6	0729	1815	10 46	10.77
7	0729	1816	10 47	10.78
8	0728	1817	10 49	10.82
9	0727	1818	10 51	10.85
10	0726	1819	10 53	10.88
11	0725	1820	10 55	10.92
12	0724	1821	10 57	10.95
13	0724	1822	10 58	10.97
14	0723	1822	10 59	10.98
15	0722	1823	11 01	11.02
16	0721	1824	11 03	11.05
17	0720	1825	11 05	11.08
18	0719	1826	11 07	11.12
19	0718	1827	11 09	11.15
20	0717	1827	11 10	11.17
21	0716	1828	11 12	11.20
22	0715	1829	11 14	11.23
23	0713	1830	11 17	11.28
24	0712	1831	11 19	11.32
25	0711	1832	11 21	11.35
26	0710	1832	11 22	11.37
27	0709	1833	11 24	11.40
28	0708	1834	11 26	11.43
29	0707	1835	11 28	11.47

TABLE B-3. SUNRISE AND SUNSET TABLES: MARCH  
US ARMY YUMA PROVING GROUND, ARIZONA

Day	Sunrise	Sunset	Daylight Hr	X Min
1	0707	1835	11 28	11.47
2	0705	1836	11 31	11.52
3	0704	1837	11 33	11.55
4	0703	1837	11 34	11.57
5	0702	1838	11 36	11.60
6	0700	1839	11 39	11.65
7	0659	1840	11 41	11.68
8	0658	1840	11 42	11.70
9	0657	1841	11 44	11.73
10	0655	1842	11 47	11.78
11	0654	1843	11 49	11.82
12	0653	1844	11 51	11.85
13	0651	1844	11 53	11.88
14	0650	1845	15 55	11.92
15	0649	1846	16 57	11.95
16	0648	1847	17 59	11.95
17	0646	1847	17 01	12.02
18	0645	1848	18 03	12.05
19	0644	1849	19 05	12.08
20	0642	1849	19 07	12.12
21	0641	1850	10 09	12.15
22	0640	1851	11 11	12.18
23	0638	1852	12 14	12.23
24	0637	1852	12 15	12.25
25	0636	1853	13 17	12.28
26	0634	1854	14 20	12.33
27	0633	1855	15 22	12.37
28	0332	1855	15 23	12.38
29	0630	1856	16 26	12.43
30	0629	1857	17 28	12.47
31	0628	1857	17 29	12.48

TABLE B-4. SUNRISE AND SUNSET TABLES. APRIL  
US ARMY YUMA PROVING GROUND, ARIZONA

Day	Sunrise	Sunset	Daylight Hr Min	X
1	0626	1858	12 32	12.53
2	0625	1859	12 34	12.57
3	0624	1900	12 36	12.60
4	0622	1900	12 38	12.63
5	0621	1901	12 40	12.67
6	0620	1902	12 42	12.70
7	0619	1902	12 43	12.72
8	0617	1903	12 46	12.77
9	0616	1904	12 48	12.80
10	0615	1905	12 50	12.83
11	0614	1905	12 51	12.85
12	0612	1906	12 54	12.90
13	0611	1907	12 56	12.93
14	0610	1907	12 57	12.95
15	0609	1908	12 59	12.98
16	0607	1909	13 02	13.03
17	0606	1909	13 03	13.05
18	0605	1910	13 05	13.08
19	0604	1911	13 07	13.12
20	0603	1912	13 09	13.15
21	0602	1912	13 10	13.17
22	0601	1913	13 12	13.20
23	0600	1914	13 14	13.23
24	0559	1914	13 15	13.25
25	0557	1915	13 18	13.30
26	0556	1916	13 20	13.33
27	0555	1916	13 21	13.35
28	0554	1917	13 28	13.38
29	0553	1918	13 25	13.42
30	0552	1919	13 27	13.45

TABLE B-5. SUNRISE AND SUNSET TABLES: MAY  
US ARMY YUMA PROVING GROUND, ARIZONA

Day	Sunrise	Sunset	Daylight Hr	X
			Min	
1	0551	1919	13 28	13.47
2	0550	1920	13 30	13.50
3	0550	1921	13 31	13.52
4	0549	1921	13 32	13.53
5	0548	1922	13 34	13.57
6	0547	1923	13 36	13.60
7	0546	1924	13 38	13.63
8	0545	1924	13 39	13.65
9	0544	1925	13 41	13.68
10	0544	1926	13 42	13.70
11	0543	1926	13 43	13.72
12	0542	1927	13 45	13.75
13	0541	1928	13 47	13.78
14	0541	1929	13 48	13.80
15	0540	1929	13 49	13.82
16	0539	1930	13 51	13.85
17	0539	1931	13 52	13.87
18	0538	1931	13 53	13.88
19	0537	1932	13 55	13.92
20	0537	1933	13 56	13.93
21	0536	1933	13 57	13.95
22	0535	1934	13 59	13.98
23	0535	1935	14 00	14.00
24	0534	1935	14 01	14.02
25	0534	1936	14 02	14.03
26	0534	1937	14 03	14.05
27	0533	1937	14 04	14.07
28	0533	1938	14 05	14.08
29	0532	1939	14 07	14.12
30	0532	1939	14 07	14.12
31	0532	1940	14 08	14.13

TABLE B-6. SUNRISE AND SUNSET TABLES: JUNE  
US ARMY YUMA PROVING GROUND, ARIZONA

Day	Sunrise	Sunset	Daylight Hr	X Min
1	0532	1940	14 08	14.13
2	0531	1941	14 10	14.17
3	0531	1942	14 11	14.18
4	0531	1942	14 11	14.18
5	0530	1943	14 13	14.22
6	0530	1943	14 13	14.22
7	0530	1944	14 14	14.23
8	0530	1944	14 14	14.23
9	0530	1945	14 15	14.25
10	0530	1945	14 15	14.25
11	0530	1946	14 16	14.27
12	0530	1946	14 16	14.27
13	0530	1946	14 16	14.27
14	0530	1947	14 17	14.28
15	0530	1947	14 17	14.28
16	0530	1947	14 17	14.28
17	0530	1948	14 18	14.30
18	0530	1948	14 18	14.30
19	0530	1948	14 18	14.30
20	0530	1948	14 18	14.30
21	0530	1948	14 18	14.30
22	0531	1949	14 18	14.30
23	0531	1949	14 18	14.30
24	0531	1949	14 18	14.30
25	0531	1949	14 18	14.30
26	0532	1950	14 18	14.30
27	0532	1950	14 18	14.30
28	0533	1950	14 17	14.28
29	0533	1950	14 17	14.28
30	0533	1950	14 17	14.28

TABLE B-7. SUNRISE AND SUNSET TABLES: JULY  
US ARMY YUMA PROVING GROUND, ARIZONA

Day	Sunrise	Sunset	Daylight Hr	X
			Min	
1	0534	1950	14 16	14. 27
2	0534	1950	14 16	14. 27
3	0535	1949	14 14	14. 23
4	0535	1949	14 14	14. 23
5	0536	1949	14 13	14. 22
6	0536	1949	14 13	14. 22
7	0536	1949	14 13	14. 22
8	0537	1949	14 12	14. 20
9	0537	1948	14 11	14. 18
10	0538	1948	14 10	14. 17
11	0539	1948	14 09	14. 15
12	0539	1948	14 09	14. 15
13	0540	1947	14 07	14. 12
14	0540	1947	14 07	14. 12
15	0541	1947	14 06	14. 10
16	0542	1946	14 04	14. 07
17	0542	1946	14 04	14. 07
18	0543	1945	14 02	14. 03
19	0543	1945	14 02	14. 03
20	0544	1944	14 00	14. 00
21	0545	1944	13 59	13. 98
22	0545	1943	13 58	13. 97
23	0546	1942	13 56	13. 93
24	0547	1942	13 55	13. 92
25	0547	1941	13 54	13. 90
26	0548	1941	13 53	13. 88
27	0549	1940	13 51	13. 85
28	0549	1939	13 50	13. 83
29	0550	1938	13 48	13. 80
30	0551	1938	13 47	13. 78
31	0551	1937	13 46	13. 77

TABLE B-8. SUNRISE AND SUNSET TABLES. AUGUST  
US ARMY YUMA PROVING GROUND, ARIZONA

Day	Sunrise	Sunset	Daylight Hr	X
			Min	
1	0552	1936	13 44	13.73
2	0553	1935	13 42	13.70
3	0553	1935	13 42	13.70
4	0554	1934	13 40	13.67
5	0555	1933	13 38	13.63
6	0555	1932	13 37	13.62
7	0556	1931	13 35	13.58
8	0557	1930	13 33	13.55
9	0557	1929	13 32	13.53
10	0558	1928	13 30	13.50
11	0559	1927	13 28	13.47
12	0559	1926	13 27	13.45
13	0600	1925	13 25	13.42
14	0601	1924	13 23	13.38
15	0601	1923	13 22	13.37
16	0602	1922	13 20	13.33
17	0603	1921	13 18	13.30
18	0603	1920	13 17	13.28
19	0604	1919	13 15	13.25
20	0604	1918	13 14	13.23
21	0605	1917	13 12	13.20
22	0606	1916	13 10	13.17
23	0606	1914	13 08	13.13
24	0607	1913	13 06	13.10
25	0608	1912	13 04	13.07
26	0608	1911	13 03	13.05
27	0609	1910	13 01	13.02
28	0610	1908	12 58	12.97
29	0610	1907	12 57	12.95
30	0611	1906	12 55	12.92
31	0612	1905	12 53	12.88

TABLE B-9. SUNRISE AND SUNSET TABLES: SEPTEMBER  
US ARMY YUMA PROVING GROUND, ARIZONA

Day	Sunrise	Sunset	Daylight Hr	X
			Min	
1	0612	1903	12 51	12.85
2	0613	1902	12 49	12.82
3	0614	1901	12 47	12.78
4	0614	1859	12 45	12.75
5	0615	1858	12 43	12.72
6	0616	1857	12 41	12.68
7	0616	1855	12 39	12.65
8	0617	1854	12 37	12.62
9	0617	1853	12 36	12.60
10	0618	1851	12 33	12.55
11	0619	1850	12 31	12.52
12	0619	1849	12 30	12.50
13	0620	1847	12 27	12.45
14	0621	1846	12 25	12.42
15	0621	1845	12 24	12.40
16	0622	1843	12 21	12.35
17	0623	1842	12 19	12.32
18	0623	1841	12 18	12.30
19	0624	1839	12 15	12.25
20	0625	1838	12 13	12.22
21	0625	1837	12 12	12.20
22	0626	1835	12 09	12.15
23	0627	1834	12 07	12.12
24	0627	1833	12 06	12.10
25	0628	1831	12 03	12.05
26	0629	1830	12 01	12.02
27	0629	1828	11 59	11.98
28	0630	1827	11 57	11.95
29	0631	1826	11 55	11.92
30	0631	1824	11 53	11.88

TABLE B-10. SUNRISE AND SUNSET TABLES: OCTOBER  
US ARMY YUMA PROVING GROUND, ARIZONA

Day	Sunrise	Sunset	Daylight Hr	X
			Min	
1	0632	1823	11 51	11.85
2	0633	1822	11 49	11.82
3	0634	1821	11 47	11.78
4	0634	1819	11 45	11.75
5	0635	1818	11 43	11.72
6	0635	1816	11 41	11.68
7	0636	1815	11 39	11.65
8	0637	1814	11 37	11.62
9	0638	1813	11 35	11.58
10	0638	1811	11 33	11.55
11	0639	1810	11 31	11.52
12	0640	1809	11 29	11.48
13	0641	1808	11 27	11.45
14	0641	1806	11 25	11.42
15	0642	1805	11 23	11.38
16	0643	1804	11 21	11.35
17	0644	1803	11 19	11.32
18	0644	1802	11 18	11.30
19	0645	1801	11 16	11.27
20	0646	1759	11 13	11.22
21	0647	1758	11 11	11.18
22	0648	1757	11 09	11.15
23	0648	1756	11 08	11.13
24	0649	1755	11 06	11.10
25	0650	1754	11 04	11.07
26	0651	1753	11 02	11.03
27	0651	1752	11 01	11.02
28	0652	1751	10 59	10.98
29	0653	1750	10 57	10.95
30	0654	1749	10 55	10.92
31	0655	1748	10 53	10.88

TABLE B-11. SUNRISE AND SUNSET TABLES: NOVEMBER  
US ARMY YUMA PROVING GROUND, ARIZONA

Day	Sunrise	Sunset	Daylight	X
			Hr Min	
1	0655	1747	10 52	10.87
2	0656	1747	10 51	10.85
3	0657	1746	10 49	10.82
4	0658	1745	10 47	10.78
5	0659	1744	10 45	10.75
6	0700	1743	10 43	10.72
7	0701	1743	10 42	10.70
8	0701	1742	10 41	10.68
9	0702	1741	10 39	10.65
10	0703	1741	10 38	10.63
11	0704	1740	10 36	10.60
12	0705	1739	10 34	10.57
13	0706	1739	10 33	10.55
14	0707	1738	10 31	10.52
15	0708	1738	10 30	10.50
16	0708	1737	10 29	10.48
17	0709	1736	10 27	10.45
18	0710	1736	10 26	10.43
19	0711	1736	10 25	10.42
20	0712	1735	10 23	10.38
21	0713	1735	10 22	10.37
22	0714	1734	10 20	10.33
23	0715	1734	10 19	10.32
24	0716	1734	10 18	10.30
25	0716	1733	10 17	10.28
26	0717	1733	10 16	10.27
27	0718	1733	10 15	10.25
28	0719	1733	10 14	10.23
29	0720	1732	10 12	10.20
30	0721	1732	10 11	10.18

TABLE B-12. SUNRISE AND SUNSET TABLES: DECEMBER  
US ARMY YUMA PROVING GROUND, ARIZONA

Day	Sunrise	Sunset	Daylight Hr	X Min
1	0722	1732	10 10	10 17
2	0723	1732	10 09	10 15
3	0723	1732	10 09	10 15
4	0724	1732	10 08	10 13
5	0725	1732	10 07	10 12
6	0726	1732	10 06	10 10
7	0727	1732	10 05	10 08
8	0727	1732	10 05	10 08
9	0728	1732	10 04	10 07
10	0729	1733	10 04	10 07
11	0730	1733	10 03	10 05
12	0730	1733	10 03	10 05
13	0731	1733	10 02	10 03
14	0732	1734	10 02	10 03
15	0732	1734	10 02	10 03
16	0733	1734	10 01	10 02
17	0734	1735	10 01	10 02
18	0734	1735	10 01	10 02
19	0734	1735	10 01	10 02
20	0735	1736	10 01	10 02
21	0736	1736	10 00	10 00
22	0736	1736	10 00	10 00
23	0737	1737	10 00	10 00
24	0737	1738	10 01	10 02
25	0737	1738	10 01	10 02
26	0738	1739	10 01	10 02
27	0739	1740	10 01	10 02
28	0739	1740	10 01	10 02
29	0739	1741	10 02	10 03
30	0740	1742	10 02	10 03
31	0740	1742	10 02	10 03

APPENDIX C . THE CLIMATE CALENDAR  
US ARMY YUMA PROVING GROUND, ARIZONA

Longitude: 114(Deg) 24' W

Latitude: 32(Deg) 50' N

Elevation: 98 m (324 ft)

YUMA PROVING GROUND, ARIZONA  
1954-DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE-1975  
MONTHLY SUMMARY OF AVERAGE CLIMATOLOGICAL DATA, WITH RAINFALL EXTREMES

JANUARY		AVG. HIGH 65			AVG. HIGH 63			AVG. HIGH 63			AVG. HIGH 64			AVG. HIGH 66			
	YEAR	HIGHEST 74	YEAR	HIGHEST 74	YEAR	HIGHEST 76	YEAR	HIGHEST 75	YEAR	HIGHEST 77	YEAR	HIGHEST 78	YEAR	HIGHEST 78	YEAR	HIGHEST 82	
<b>1</b>	YEAR 1962	<b>2</b>	YEAR 1964	<b>3</b>	YEAR 1969	<b>4</b>	YEAR 1969	<b>5</b>	YEAR 1969	<b>6</b>	YEAR 1954	<b>7</b>	YEAR 1962	<b>7</b>	YEAR 1962	<b>7</b>	
Avg. Low 40	YEAR 1967	Avg. Low 39	YEAR 1960	Avg. Low 38	YEAR 1974	Avg. Low 38	YEAR 1974	Avg. Low 39	YEAR 1972	Avg. Low 39	YEAR 1971	Avg. Low 40	YEAR 1971	Avg. Low 40	YEAR 1971	Avg. Low 40	
Lowest 29	YEAR 1967	Lowest 29	YEAR 1960	Lowest 24	YEAR 1974	Lowest 29	YEAR 1974	Lowest 29	YEAR 1972	Lowest 27	YEAR 1971	Lowest 25	YEAR 1971	Lowest 25	YEAR 1971	Lowest 25	
Avg. High 65	YEAR 1962	Avg. High 66	YEAR 1962	Avg. High 67	YEAR 1962	Avg. High 66	YEAR 1962	Avg. High 66	YEAR 1956	Avg. High 66	YEAR 1956	Avg. High 67	YEAR 1956	Avg. High 67	YEAR 1956	Avg. High 67	
Highest 82	YEAR 1962	Highest 79	YEAR 1962	Highest 77	YEAR 1962	Highest 77	YEAR 1962	Highest 77	YEAR 1956	Highest 78	YEAR 1956	Highest 76	YEAR 1956	Highest 77	YEAR 1956	Highest 77	
Year 1962	<b>8</b>	Year 1962	<b>9</b>	Year 1962	<b>10</b>	Year 1962	<b>11</b>	Year 1962	<b>12</b>	Year 1962	<b>13</b>	Year 1962	<b>14</b>	Year 1962	<b>14</b>	Year 1962	<b>14</b>
Avg. Low 40	Year 1971	Avg. Low 40	Year 1971	Avg. Low 40	Year 1964	Avg. Low 40	Year 1964	Avg. Low 40	Year 1954	Avg. Low 40	Year 1962	Avg. Low 42	Year 1962	Avg. Low 42	Year 1962	Avg. Low 42	
Lowest 23	Year 1971	Lowest 26	Year 1971	Lowest 25	Year 1964	Lowest 30	Year 1964	Lowest 30	Year 1954	Lowest 25	Year 1962	Lowest 28	Year 1962	Lowest 28	Year 1962	Lowest 26	
Avg. High 68	Year 1967	Avg. High 70	Year 1961	Avg. High 70	Year 1959	Avg. High 70	Year 1959	Avg. High 70	Year 1954	Avg. High 70	Year 1962	Avg. High 68	Year 1962	Avg. High 68	Year 1962	Avg. High 68	
Highest 78	Year 1967	Highest 79	Year 1961	Highest 81	Year 1959	Highest 85	Year 1959	Highest 89	Year 1971	Highest 89	Year 1971	Highest 86	Year 1971	Highest 86	Year 1971	Highest 86	
Year 1967	<b>15</b>	Year 1963	<b>16</b>	Year 1963	<b>17</b>	Year 1963	<b>18</b>	Year 1963	<b>19</b>	Year 1963	<b>20</b>	Year 1963	<b>21</b>	Year 1963	<b>21</b>	Year 1963	<b>21</b>
Avg. Low 43	Year 1963	Avg. Low 45	Year 1963	Avg. Low 44	Year 1963	Avg. Low 43	Year 1963	Avg. Low 42	Year 1963	Avg. Low 42	Year 1963	Avg. Low 43	Year 1963	Avg. Low 42	Year 1963	Avg. Low 42	
Lowest 28	Year 1963	Lowest 28	Year 1963	Lowest 31	Year 1963	Lowest 31	Year 1963	Lowest 31	Year 1971	Lowest 35	Year 1971	Lowest 28	Year 1971	Lowest 30	Year 1971	Lowest 26	
Avg. High 67	Year 1970	Avg. High 68	Year 1968	Avg. High 69	Year 1959	Avg. High 69	Year 1959	Avg. High 70	Year 1959	Avg. High 70	Year 1971	Avg. High 69	Year 1971	Avg. High 69	Year 1971	Avg. High 69	
Highest 77	Year 1970	Highest 77	Year 1968	Highest 76	Year 1959	Highest 76	Year 1959	Highest 79	Year 1959	Highest 81	Year 1971	Highest 82?	Year 1971	Highest 84	Year 1971	Highest 84	
Year 1970	<b>22</b>	Year 1963	<b>23</b>	Year 1968	<b>24</b>	Year 1968	<b>25</b>	Year 1968	<b>26</b>	Year 1968	<b>27</b>	Year 1968	<b>28</b>	Year 1968	<b>28</b>	Year 1968	<b>28</b>
Avg. Low 42	Year 1963	Avg. Low 42	Year 1966	Avg. Low 42	Year 1966	Avg. Low 42	Year 1966	Avg. Low 43	Year 1964	Avg. Low 43	Year 1964	Avg. Low 44	Year 1964	Avg. Low 43	Year 1964	Avg. Low 43	
Lowest 31	Year 1963	Lowest 32	Year 1966	Lowest 31	Year 1966	Lowest 30	Year 1966	Lowest 30	Year 1964	Lowest 30	Year 1964	Lowest 32	Year 1964	Lowest 33	Year 1964	Lowest 33	
Avg. High 70	Year 1971	Avg. High 70	Year 1971	Avg. High 83	Year 1971	Avg. High 84	Year 1971	Avg. High 84	Year 1954	Avg. High 89	Year 1971	Rainfall (Inches)	Rainfall (Inches)	Rainfall (Inches)	Rainfall (Inches)	Rainfall (Inches)	
Highest 84	Year 1971	Highest 84	Year 1971	Highest 83	Year 1971	Highest 84	Year 1971	Highest 84	Year 1954	Max. Int. 23: 8th, 1971	Max. Int. 23: 8th, 1971	0.40	0	0	0	0	
Year 1971	<b>29</b>	Year 1971	<b>30</b>	Year 1971	<b>31</b>	Year 1971	<b>31</b>	Year 1971	<b>31</b>	Year 1971	<b>31</b>	Avg. Temp. 67	Avg. Min. 41	Avg. Max. 74	Avg. Min. 69	Avg. Max. 74	
Avg. Low 42	Year 1975	Avg. Low 42	Year 1969	Avg. Low 42	Year 1957	Avg. Low 36	Year 1957	Avg. Low 36	Year 1957	Avg. Rel. Humidity (%)	Year 1957	Average No. of Days Partly Cloudy	4	Average No. of Days Clear	17	Average No. of Days Cloudy	5
Lowest 35	Year 1975	Lowest 35	Year 1969	Lowest 31	Year 1957	Lowest 31	Year 1957	Lowest 31	Year 1957	Precip. Wind Speed (Kts)	Year 1957	Average Wind Dr N/NW	4	Average Sky Cover	4/10	Average Sky Cover	4/10

**YUMA PROVING GROUND, ARIZONA  
1954-DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE-1975  
MONTHLY SUMMARY OF AVERAGE CLIMATOLOGICAL DATA WITH RAINFALL EXTREMES**

**YUMA PROVING GROUND, ARIZONA  
1954-DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE-1975  
MONTHLY SUMMARY OF AVERAGE CLIMATOLOGICAL DATA, WITH RAINFALL EXTREMES**

## YUMA PROVING GROUND, ARIZONA

1954- DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE-1975

APRIL

MONTHLY SUMMARY OF AVERAGE CLIMATOLOGICAL DATA, WITH RAINFALL EXTREMES													
	Avg.	High	81	Avg.	High	80	Avg.	High	83	Avg.	High	84	
HIGHEST	98	HIGHEST	98	HIGHEST	100	HIGHEST	103	HIGHEST	97	HIGHEST	97	HIGHEST	96
YEAR	1966	YEAR	1959	YEAR	1961	YEAR	1961	YEAR	1960	YEAR	1960	YEAR	1960; '62
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	
Avg. Low	54	Avg. Low	53	Avg. Low	53	Avg. Low	54	Avg. Low	55	Avg. Low	56	Avg. Low	56
LOWEST	48	LOWEST	43	LOWEST	42	LOWEST	44	LOWEST	43	LOWEST	45	LOWEST	44
YEAR 1954-'67'75	YEAR 1975	YEAR	1975	YEAR	1975	YEAR	1975	YEAR	1971	YEAR	1962	YEAR	1964
Avg. High	85	Avg. High	84	Avg. High	85	Avg. High	84	Avg. High	85	Avg. High	86	Avg. High	85
HIGHEST	97	HIGHEST	96	HIGHEST	95	HIGHEST	94	HIGHEST	98	HIGHEST	102	HIGHEST	102
YEAR	1962	YEAR	1960	YEAR	1960	YEAR	1960	YEAR	1971	YEAR	1962	YEAR	1962
<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	
Avg. Low	54	Avg. Low	55	Avg. Low	56	Avg. Low	57	Avg. Low	55	Avg. Low	56	Avg. Low	57
LOWEST	43	LOWEST	44	LOWEST	43	LOWEST	46	LOWEST	44	LOWEST	45	LOWEST	50
YEAR	1975	YEAR	1973	YEAR	1975	YEAR	1975	YEAR	1967	YEAR	1967	YEAR	1972
Avg. High	86	Avg. High	86	Avg. High	86	Avg. High	84	Avg. High	82	Avg. High	84	Avg. High	85
HIGHEST	102	HIGHEST	103	HIGHEST	104	HIGHEST	104	HIGHEST	101	HIGHEST	103	HIGHEST	104
YEAR	1962	YEAR	1954	YEAR	1954	YEAR	1954	YEAR	1954	YEAR	1954	YEAR	1958
<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	
Avg. Low	56	Avg. Low	57	Avg. Low	58	Avg. Low	57	Avg. Low	56	Avg. Low	56	Avg. Low	55
LOWEST	44	LOWEST	49	LOWEST	49	LOWEST	46	LOWEST	45	LOWEST	48	LOWEST	46
YEAR	1970	YEAR	1970	YEAR	1963'67'75	YEAR	1970	YEAR	1975	YEAR	1968	YEAR	1973
Avg. High	85	Avg. High	85	Avg. High	85	Avg. High	84	Avg. High	84	Avg. High	86	Avg. High	87
HIGHEST	101	HIGHEST	98	HIGHEST	97	HIGHEST	95	HIGHEST	98	HIGHEST	100	HIGHEST	98
YEAR	1958	YEAR	1962	YEAR	1962	YEAR	1962	YEAR	1966	YEAR	1973	YEAR	1959
<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>	<b>31</b>	<b>31</b>	<b>31</b>	
Avg. Low	56	Avg. Low	57	Avg. Low	57	Avg. Low	58	Avg. Low	58	Avg. Low	56	Avg. Low	57
LOWEST	43	LOWEST	44	LOWEST	49	LOWEST	47	LOWEST	49	LOWEST	47	LOWEST	46
YEAR	1957	YEAR	1967	YEAR	1960; 61	YEAR	1964	YEAR	1971	YEAR	1963	YEAR	1970
Avg. High	88	Avg. High	89	Avg. High	89	RECORD TEMPERATURES (°F).							
HIGHEST	102	HIGHEST	100	HIGHEST	100	MAX. DAY 104; 17, 18, '54, '58	RAINFALL (IN. INCHES)						
YEAR	1959	YEAR	1959; 65	YEAR	YEAR	MIN. DAY 42; 3d, '75	MONTLY AVG.						
<b>29</b>	<b>30</b>	<b>31</b>				AVG. MAX 85	MAX. DAY 56						
Avg. Low	58	Avg. Low	59	Avg. Low	59	AVG. PEL. HUMIDITY (28%)	MIN. DAY 65						
LOWEST	44	LOWEST	49	LOWEST	49	AVG. HGT. WIND SPEED (KTS) 5	24 HR. MAX.						
YEAR	1970	YEAR	1967	YEAR	YEAR	PARTLY CLOUDY 6	AVG. NC. OF DAYS CLEAR 21						
						PARTLY CLOUDY 3	AVG. SKY COVER 3/10						

1954- DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE - 1975  
 MAY MONTHLY SUMMARY OF AVERAGE CLIMATOLOGICAL DATA, WITH RAINFALL EXTREMES

YEAR	1961	Avg. High 90 Highest 101 Lowest 47	Avg. High 90 Highest 103 Lowest 49	Avg. High 89 Highest 103 Lowest 52	Avg. High 88 Highest 100 Lowest 51	Avg. High 87 Highest 105 Lowest 46	Avg. High 89 Highest 104 Lowest 48	Avg. High 89 Highest 103 Lowest 52	
YEAR	1962	2 YEAR	3 YEAR	4 YEAR	5 YEAR	6 YEAR	7 YEAR	7 YEAR	
YEAR	1963	Avg. Low 60 Lowest 47	Avg. Low 60 Lowest 49	Avg. Low 60 Lowest 52	Avg. Low 60 Lowest 51	Avg. Low 60 Lowest 46	Avg. Low 60 Lowest 48	Avg. Low 61 Lowest 52	Avg. Low 61 Lowest 52
YEAR	1964	Avg. High 90 Highest 102 Lowest 50	Avg. High 91 Highest 102 Lowest 50	Avg. High 92 Highest 106 Lowest 54	Avg. High 93 Highest 110 Lowest 55	Avg. High 91 Highest 106 Lowest 55	Avg. High 93 Highest 106 Lowest 55	Avg. High 92 Highest 102 Lowest 54	Avg. High 92 Highest 101 Lowest 54
YEAR	1965	8 YEAR	9 YEAR	10 YEAR	11 YEAR	12 YEAR	13 YEAR	14 YEAR	
YEAR	1966	Avg. Low 61 Lowest 50	Avg. Low 63 Lowest 54	Avg. Low 63 Lowest 57	Avg. Low 63 Lowest 57	Avg. Low 63 Lowest 55	Avg. Low 62 Lowest 55	Avg. Low 63 Lowest 49	Avg. Low 64 Lowest 54
YEAR	1967	Avg. High 90 Highest 102 Lowest 50	Avg. High 91 Highest 102 Lowest 50	Avg. High 92 Highest 106 Lowest 54	Avg. High 93 Highest 110 Lowest 56	Avg. High 91 Highest 106 Lowest 56	Avg. High 93 Highest 106 Lowest 56	Avg. High 92 Highest 102 Lowest 54	Avg. High 92 Highest 101 Lowest 54
YEAR	1968	Avg. High 93 Highest 102 Lowest 50	Avg. High 95 Highest 108 Lowest 54	Avg. High 96 Highest 109 Lowest 56	Avg. High 96 Highest 106 Lowest 57	Avg. High 96 Highest 108 Lowest 57	Avg. High 95 Highest 106 Lowest 57	Avg. High 94 Highest 106 Lowest 56	Avg. High 94 Highest 108 Lowest 56
YEAR	1969	15 YEAR	16 YEAR	17 YEAR	18 YEAR	19 YEAR	20 YEAR	21 YEAR	
YEAR	1970	Avg. Low 63 Lowest 50	Avg. Low 64 Lowest 53	Avg. Low 66 Lowest 52	Avg. Low 67 Lowest 57	Avg. Low 66 Lowest 53	Avg. Low 66 Lowest 52	Avg. Low 66 Lowest 52	Avg. Low 65 Lowest 52
YEAR	1971	Avg. High 94 Highest 106 Lowest 53	Avg. High 94 Highest 105 Lowest 53	Avg. High 95 Highest 106 Lowest 55	Avg. High 95 Highest 109 Lowest 56	Avg. High 96 Highest 110 Lowest 56	Avg. High 96 Highest 110 Lowest 58	Avg. High 96 Highest 109 Lowest 54	Avg. High 96 Highest 113 Lowest 55
YEAR	1972	22 YEAR	23 YEAR	24 YEAR	25 YEAR	26 YEAR	27 YEAR	28 YEAR	
YEAR	1973	Avg. Low 64 Lowest 53	Avg. Low 65 Lowest 56	Avg. Low 65 Lowest 56	Avg. Low 65 Lowest 56	Avg. Low 66 Lowest 58	Avg. Low 66 Lowest 58	Avg. Low 67 Lowest 54	Avg. Low 67 Lowest 55
YEAR	1974	Avg. High 97 Highest 111 Lowest 53	Avg. High 96 Highest 106 Lowest 53	Avg. High 96 Highest 105 Lowest 53	Avg. High 96 Highest 105 Lowest 53	Avg. High 96 Highest 109 Lowest 57	Avg. High 96 Highest 110 Lowest 58	Avg. High 96 Highest 110 Lowest 58	Avg. High 96 Highest 113 Lowest 55
YEAR	1975	29 YEAR	30 YEAR	31 YEAR	32 YEAR	33 YEAR	34 YEAR	35 YEAR	
YEAR	1976	Avg. Rel. Humidity 46: 5th, 1964 Avg. Max Temp 93 Avg. Rel. Humidity (26) 32 Avg. Wind Speed (K.M.) 5 Prevailing Wind Dir. W	Avg. Rel. Humidity 46: 5th, 1964 Avg. Max Temp 64 Avg. Rel. Humidity (26) 32 Avg. Wind Speed (K.M.) 5 Prevailing Wind Dir. W	Avg. Rel. Humidity 46: 5th, 1964 Avg. Max Temp 64 Avg. Rel. Humidity (26) 32 Avg. Wind Speed (K.M.) 5 Prevailing Wind Dir. W	Avg. Rel. Humidity 46: 5th, 1964 Avg. Max Temp 64 Avg. Rel. Humidity (26) 32 Avg. Wind Speed (K.M.) 5 Prevailing Wind Dir. W	Avg. Rel. Humidity 46: 5th, 1964 Avg. Max Temp 64 Avg. Rel. Humidity (26) 32 Avg. Wind Speed (K.M.) 5 Prevailing Wind Dir. W	Avg. Rel. Humidity 46: 5th, 1964 Avg. Max Temp 64 Avg. Rel. Humidity (26) 32 Avg. Wind Speed (K.M.) 5 Prevailing Wind Dir. W	Avg. Rel. Humidity 46: 5th, 1964 Avg. Max Temp 64 Avg. Rel. Humidity (26) 32 Avg. Wind Speed (K.M.) 5 Prevailing Wind Dir. W	Avg. Rel. Humidity 46: 5th, 1964 Avg. Max Temp 64 Avg. Rel. Humidity (26) 32 Avg. Wind Speed (K.M.) 5 Prevailing Wind Dir. W
YEAR	1977	Rainfall (in inches) Monthly Avg Monthly Max Avg. HR Max Avg. Rel. No. of Days Clear 25 Partly Cloudy 5 Average Sky Cover 2/10	Rainfall (in inches) Monthly Avg Monthly Max Avg. HR Max Avg. Rel. No. of Days Clear 25 Partly Cloudy 5 Average Sky Cover 2/10	Rainfall (in inches) Monthly Avg Monthly Max Avg. HR Max Avg. Rel. No. of Days Clear 25 Partly Cloudy 5 Average Sky Cover 2/10	Rainfall (in inches) Monthly Avg Monthly Max Avg. HR Max Avg. Rel. No. of Days Clear 25 Partly Cloudy 5 Average Sky Cover 2/10	Rainfall (in inches) Monthly Avg Monthly Max Avg. HR Max Avg. Rel. No. of Days Clear 25 Partly Cloudy 5 Average Sky Cover 2/10	Rainfall (in inches) Monthly Avg Monthly Max Avg. HR Max Avg. Rel. No. of Days Clear 25 Partly Cloudy 5 Average Sky Cover 2/10	Rainfall (in inches) Monthly Avg Monthly Max Avg. HR Max Avg. Rel. No. of Days Clear 25 Partly Cloudy 5 Average Sky Cover 2/10	Rainfall (in inches) Monthly Avg Monthly Max Avg. HR Max Avg. Rel. No. of Days Clear 25 Partly Cloudy 5 Average Sky Cover 2/10

**YUMA PROVING GROUND, ARIZONA**  
**1954 - DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE - 1975**  
**MONTHLY SUMMARY OF AVERAGE CLIMATOLOGICAL DATA, WITH RAINFALL EXTREMES**

JUNE		1954 - DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE - 1975												
Avg.	High	97	Avg.	High	99									
Highest	108	Highest	112	Highest	112	Highest	112	Highest	111	Highest	114	Highest	111	Avg. High 98
Year	1957	YEAR 1957; '60	YEAR	1957	YEAR	Highest 114								
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	
Avg.	Low	66	Avg.	Low	69	Avg.	Low	70	Avg.	Low	70	Avg.	Low	69
Lowest	57	Lowest	60	Lowest	57	Lowest	57	Lowest	59	Lowest	59	Lowest	62	Avg. Low 70
Year	1955	YEAR 1955; '61	YEAR	1955	YEAR	1955	YEAR	1955	YEAR	1956	YEAR	1956	YEAR	Lowest 63
Avg.	High	97	Avg.	High	97	Avg.	High	96	Avg.	High	99	Avg.	High	100
Highest	114	Highest	113	Highest	110	Highest	110	Highest	114	Highest	113	Highest	113	Avg. High 101
Year	1955	YEAR	1955	YEAR	1955	YEAR	1955	YEAR	1956	YEAR	1956	YEAR	1959	Highest 117
<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	
Avg.	Low	68	Avg.	Low	68	Avg.	Low	68	Avg.	Low	68	Avg.	Low	71
Lowest	60	Lowest	59	Lowest	60	Lowest	60	Lowest	60	Lowest	62	Lowest	62	Avg. Low 70
Year	1968	YEAR	1965	YEAR	1964	YEAR	1964	YEAR	1964	YEAR	1964	YEAR	1970	Lowest 61
Avg.	High	101	Avg.	High	102	Avg.	High	103	Avg.	High	104	Avg.	High	105
Highest	116	Highest	115	Highest	111	Highest	111	Highest	115	Highest	115	Highest	116	Avg. High 107
Year	1974	YEAR	1974	YEAR	1974	YEAR	1974	YEAR	1968	YEAR	1968	YEAR	1960;	Highest 115
<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	
Avg.	Low	72	Avg.	Low	72	Avg.	Low	73	Avg.	Low	74	Avg.	Low	74
Lowest	54	Lowest	58	Lowest	61	Lowest	61	Lowest	64	Lowest	66	Lowest	66	Avg. Low 75
Year	1962	YEAR	1962	YEAR	1965	YEAR	1965	YEAR	1965	YEAR	1975	YEAR	1975	Lowest 63
Avg.	High	107	Avg.	High	106									
Highest	115	Highest	115	Highest	118	Highest	118	Highest	115	Highest	115	Highest	117	Avg. High 105
Year	1960	YEAR	1959	YEAR	1959	YEAR	1959	YEAR	1957	YEAR	1974	YEAR	1974	Highest 115
<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>					
Avg.	Low	75	Avg.	Low	76	Avg.	Low	76	Avg.	Low	75	Avg.	Low	76
Lowest	66	Lowest	67	Lowest	62	Lowest	62	Lowest	67	Lowest	59	Lowest	65	Avg. Low 77
Year	1975	YEAR	1975	YEAR	1965	Lowest 66								
Avg.	High	106	Avg.	High	106	Avg.	High	106	Avg.	High	106	Avg.	High	106
Highest	111	Highest	113	Highest	113	Highest	113	Highest	111	Highest	115	Highest	117	Avg. High 105
Year	1960'72'74	YEAR	1960; '72	YEAR	1960	YEAR	1960	YEAR	1957	YEAR	1974	YEAR	1974	Highest 115
<b>29</b>	<b>30</b>	<b>31</b>												
Avg.	Low	77	Avg.	Low	77	Avg.	Low	77	Avg.	Low	77	Avg.	Low	77
Lowest	69	Lowest	69	Lowest	69	Lowest	69	Lowest	69	Lowest	65	Lowest	65	Avg. Low 77
Year	1965	YEAR	1955	YEAR	1955	YEAR	1955	YEAR	1955	YEAR	1955	YEAR	1955	Lowest 66
(IN INCHES)														
MAXIMUM 18:24h, 1957														
MINIMUM 34:15h, 1962														
AVG MAX 102 AM 72														
AVG REL HUMIDITY (26%)														
AVG WIND SPEED (KTS) 5														
PREDOMINATING WIND DIR W&SW														
(IN INCHES)														
MAX HLR 0.07														
MONTHLY AVG 0														
MONTHLY MAX 0														
24 HR MAX 0														
AVERAGE NO. OF DAYS CLEAR 26														
PARTLY CLOUDY 4														
CLOUDY 0*														
AVERAGE SKY COVER 2/10														

\* In 19 years only 8 days have been cloudy.

YUMA PROVING GROUND, ARIZONA  
1954 - DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE - 1975  
MONTHLY SUMMARY OF AVERAGE CLIMATOLOGICAL DATA, WITH RAINFALL EXTREMES

JULY		CLIMATOLOGICAL DATA														
		Avg.	High	107	Avg.	High	107	Avg.	High	106	Avg.	High	106	Avg.	High	106
HIGHEST	114	HIGHEST	113	HIGHEST	114	HIGHEST	116	HIGHEST	112	HIGHEST	113	HIGHEST	114	Avg.	High	106
YEAR	1972	YEAR	1972;	'73	YEAR	1957	YEAR	1972	YEAR	1957	YEAR	1966	YEAR	1958	HIGHEST	114
<b>1</b>		<b>2</b>		<b>3</b>		<b>4</b>		<b>5</b>		<b>6</b>		<b>7</b>		<b>8</b>		<b>9</b>
Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.
LOWEST	70	LOWEST	67	LOWEST	69	LOWEST	68	LOWEST	67	LOWEST	69	LOWEST	69	LOWEST	70	LOWEST
YEAR	1955;	'68	YEAR	1954	YEAR	1956	YEAR	1961	YEAR	1961	YEAR	1961	YEAR	1955	YEAR	1955
Avg.	High	Avg.	High	Avg.	High	Avg.	High	Avg.	High	Avg.	High	Avg.	High	Avg.	High	Avg.
HIGHEST	117	HIGHEST	118	HIGHEST	115	HIGHEST	117	HIGHEST	116	HIGHEST	116	HIGHEST	113	HIGHEST	114	HIGHEST
YEAR	1958	YEAR	1958	YEAR	1958	YEAR	1958	YEAR	1958	YEAR	1964	YEAR	1960;	'71	YEAR	1963
<b>8</b>		<b>9</b>		<b>10</b>		<b>11</b>		<b>12</b>		<b>13</b>		<b>14</b>		<b>15</b>		<b>16</b>
Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.
LOWEST	71	LOWEST	73	LOWEST	71	LOWEST	71	LOWEST	71	LOWEST	71	LOWEST	68	LOWEST	81	LOWEST
YEAR	1955	YEAR	1960	YEAR	1955	YEAR	1955	YEAR	1974	YEAR	1974	YEAR	1962	YEAR	1962	YEAR
Avg.	High	Avg.	High	Avg.	High	Avg.	High	Avg.	High	Avg.	High	Avg.	High	Avg.	High	Avg.
HIGHEST	113	HIGHEST	115	HIGHEST	112	HIGHEST	116	HIGHEST	113	HIGHEST	115	HIGHEST	112	HIGHEST	114	HIGHEST
YEAR	1954;	'60	YEAR	1960	YEAR	1960	YEAR	1960	YEAR	1960;	'61	YEAR	1960	YEAR	1960	YEAR
<b>15</b>		<b>16</b>		<b>17</b>		<b>18</b>		<b>19</b>		<b>20</b>		<b>21</b>		<b>22</b>		<b>23</b>
Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.
LOWEST	70	LOWEST	69	LOWEST	70	LOWEST	70	LOWEST	76	LOWEST	73	LOWEST	74	LOWEST	82	LOWEST
YEAR	1962	YEAR	1962	YEAR	1962	YEAR	1962	YEAR	1962;	'75	YEAR	1958	YEAR	1958	YEAR	1973
Avg.	High	Avg.	High	Avg.	High	Avg.	High	Avg.	High	Avg.	High	Avg.	High	Avg.	High	Avg.
HIGHEST	114	HIGHEST	113	HIGHEST	113	HIGHEST	113	HIGHEST	114	HIGHEST	112	HIGHEST	112	HIGHEST	116	HIGHEST
YEAR	1963	YEAR	1959	YEAR	1959	YEAR	1957	YEAR	1974	YEAR	1959	YEAR	1954;	'58	YEAR	1954
<b>22</b>		<b>23</b>		<b>24</b>		<b>25</b>		<b>26</b>		<b>27</b>		<b>28</b>		<b>29</b>		<b>30</b>
Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.
LOWEST	74	LOWEST	70	LOWEST	72	LOWEST	75	LOWEST	76	LOWEST	76	LOWEST	77	LOWEST	82	LOWEST
YEAR	1973	YEAR	1973	YEAR	1973	YEAR	1973	YEAR	1965	YEAR	1975	YEAR	1958	YEAR	1958	YEAR
Avg.	High	Avg.	High	Avg.	High	Avg.	High	Avg.	High	Avg.	High	Avg.	High	Avg.	High	Avg.
HIGHEST	112	HIGHEST	115	HIGHEST	118	HIGHEST	115	HIGHEST	118	HIGHEST	115	HIGHEST	118	HIGHEST	118	HIGHEST
YEAR	1972	YEAR	1957	YEAR	1957	YEAR	1957	YEAR	1957	YEAR	1957	YEAR	1957	YEAR	1957	YEAR
<b>31</b>																
Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.	Low	Avg.
LOWEST	76	LOWEST	68	LOWEST	76	LOWEST	76	LOWEST	76	LOWEST	76	LOWEST	76	LOWEST	76	LOWEST
YEAR	1961;	'65	YEAR	1958	YEAR	1958	YEAR	1958	YEAR	1958	YEAR	1958	YEAR	1958	YEAR	1958
RECORD TEMPERATURES (°F.)																
MAXIMUM 118; 31st, '57; 9th, '58																
MINIMUM 67; 2d, '54; 5th, '61																
Ave. MAX 106; Ave. MIN 81																
Ave. REC. THIN. DAY (35) 20																
Ave. WIND SPEED (KTS) 5																
PREVAILING WIND LIF SW																
(IN INCHES)																
RAINFALL SUM. ALL MONTHLY AVG.																
0.17 0																
MONTHLY MAX 1.52; 1958 0																
24 HR MAX 1.36; 30 '58 0																
AVERAGE NO. OF DAYS CLEAR 20																
PARTLY CLOUDY 9																
AVG. AGE SKY CCVER 3/10																

**YUMA PROVING GROUND, ARIZONA  
1954- DAILY TEMPERATURE MEANS AND EXTREMS, WITH YEAR OF OCCURRENCE - 1975  
MONTHLY SUMMARY OF AVERAGE CLIMATOLOGICAL DATA, WITH RAINFALL EXTREMES**

YUMA PROVING GROUND, ARIZONA

1954- DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE -1975  
MONTHLY SUMMARY OF AVERAGE CLIMATOLOGICAL DATA, WITH RAINFALL, EXTREMES

SEPTEMBER	1954- DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE -1975												
	AVERAGE			HIGH			LOW			EXTREME			
Avg. High	102	Avg.	High	102	Avg.	High	103	Avg.	High	104	Avg.	High	103
Highest	114	Highest	110	Highest	110	Highest	111	Highest	110	Highest	112	Highest	111
Year	1969	Year	1956;	Year	1956;	Year	1956	Year	1955	Year	1958	Year	1955
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>
Avg. Low	76	Avg.	Low	77	Avg.	Low	77	Avg.	Low	77	Avg.	Low	77
Lowest	67	Lowest	70	Lowest	69	Lowest	69	Lowest	65	Lowest	69	Lowest	69
Year	1966	Year	1966;	Year	1964	Year	1964	Year	1961	Year	1973	Year	1964
Avg. High	104	Avg.	High	105	Avg.	High	104	Avg.	High	103	Avg.	High	102
Highest	110	Highest	113	Highest	111	Highest	112	Highest	114	Highest	112	Highest	109
Year	1963,'69,'74	Year	1968	Year	1956;'	Year	1956;'	Year	1963;'	Year	1971	Year	1971
<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>
Avg. Low	78	Avg.	Low	78	Avg.	Low	79	Avg.	Low	77	Avg.	Low	77
Lowest	69	Lowest	66	Lowest	68	Lowest	68	Lowest	67	Lowest	68	Lowest	74
Year	1965	Year	1961	Year	1972	Year	1972	Year	1972	Year	1972	Year	1970
Avg. High	101	Avg.	High	101	Avg.	High	100	Avg.	High	98	Avg.	High	97
Highest	107	Highest	109	Highest	113	Highest	113	Highest	111	Highest	107	Highest	109
Year	1962,'65;'	Year	1962	Year	1956	Year	1956	Year	1962	Year	1958	Year	1958
<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>
Avg. Low	74	Avg.	Low	73	Avg.	Low	73	Avg.	Low	72	Avg.	Low	71
Lowest	63	Lowest	62	Lowest	64	Lowest	65	Lowest	65	Lowest	61	Lowest	59
Year	1970	Year	1970	Year	1959	Year	1957;'	Year	1959	Year	1973	Year	1965
Avg. High	97	Avg.	High	97	Avg.	High	98	Avg.	High	98	Avg.	High	98
Highest	110	Highest	110	Highest	107	Highest	111	Highest	111	Highest	107	Highest	107
Year	1966	Year	1966	Year	1956	Year	1956	Year	1963	Year	1956	Year	1969
<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>	<b>32</b>	<b>33</b>	<b>34</b>	<b>35</b>
Avg. Low	70	Avg.	Low	69	Avg.	Low	70	Avg.	Low	69	Avg.	Low	70
Lowest	62	Lowest	58	Lowest	61	Lowest	62	Lowest	62	Lowest	61	Lowest	59
Year	1965	Year	1960	Year	1958	Year	1958	Year	1959;'	Year	1968	Year	1971
Avg. High	97	Avg.	High	97	Avg.	High	97	Avg.	High	97	RECORDED TEMPERATURES (°F.)	RAINFALL (IN INCHES)	
Highest	106	Highest	105	Highest	105	Highest	105	Highest	104	Highest	104	MONTHLY AVG	
Year	1969	Year	1969	Year	1969	Year	1969	Year	1969	Year	1969	MONTHLY MAX	
<b>29</b>	<b>30</b>	<b>31</b>	<b>32</b>	<b>33</b>	<b>34</b>	<b>35</b>	<b>36</b>	<b>37</b>	<b>38</b>	<b>39</b>	<b>40</b>	<b>41</b>	<b>42</b>
Avg. Low	70	Avg.	Low	69	Avg.	Low	69	Avg.	Low	69	Avg.	Low	70
Lowest	61	Lowest	57	Lowest	57	Lowest	57	Lowest	57	Lowest	59	Lowest	59
Year	1962	Year	1959	Year	1971								
MAXIMUM: 114; 1st, 1969; 12th, 71													
MINIMUM: 55; 20th, 1965													
AVG. MAX TEMP.: 74													
AVG. REL. HUMIDITY (%)													
AVG. WIND SPEED (KTS)													
PREDICTED WIND DIR. W													
AVERAGE SKY COVER 2/10													

**YUMA PROVING GROUND, ARIZONA  
1954 - DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE - 1975  
MONTHLY SUMMARY OF AVERAGE CLIMATOLOGICAL DATA WITH RAINFALL EXTREMES**

Avg.	High	97	Avg.	High	95	Avg.	High	93	Avg.	High	93	Avg.	High	93	Avg.	High	93	Avg.	High	93	Avg.	High	93
Highest	104	Highest	103	Highest	102	Highest	103	Highest	103	Highest	105	Highest	104	Highest	104	Highest	103	Highest	103	Year	1960		
Year	1974	Year	1974	Year	1974	Year	1974	Year	1975	Year	1975	Year	1975	Year	1975	Year	1975	Year	1975	Year	1960		
<b>1</b>			<b>2</b>			<b>3</b>			<b>4</b>			<b>5</b>			<b>6</b>			<b>7</b>					
Avg.	Low	68	Avg.	Low	68	Avg.	Low	68	Avg.	Low	66	Avg.	Low	66	Avg.	Low	65	Avg.	Low	65	Avg.	Low	65
Lowest	57	Lowest	54	Lowest	56	Lowest	54	Lowest	54	Lowest	53	Lowest	53	Lowest	56	Lowest	58	Lowest	58	Lowest	58	Lowest	58
Year	1971	Year	1959	Year	1959	Year	1959	Year	1959	Year	1959	Year	1959	Year	1960	Year	1960	Year	1957	Year	1957	Year	
Avg.	High	92	Avg.	High	92	Avg.	High	92	Avg.	High	91	Avg.	High	92	Avg.	High	92	Avg.	High	92	Avg.	High	92
Highest	103	Highest	102	Highest	100	Highest	104	Highest	Highest	Highest	105	Highest	104	Highest	105	Highest	102	Highest	102	Highest	102	Highest	102
Year	1963	Year	1965	Year	1958;	Year	'64	Year	1965	Year	1965	Year	1965	Year	1955	Year	1955	Year	1958	Year	1958	Year	
<b>8</b>			<b>9</b>			<b>10</b>			<b>11</b>			<b>12</b>			<b>13</b>			<b>14</b>					
Avg.	Low	65	Avg.	Low	64	Avg.	Low	63	Avg.	Low	62	Avg.	Low	63	Avg.	Low	62	Avg.	Low	64	Avg.	Low	64
Lowest	55	Lowest	47	Lowest	47	Lowest	47	Lowest	50	Lowest	50	Lowest	52	Lowest	49	Lowest	49	Lowest	53	Lowest	53	Lowest	53
Year	1970	Year	1961	Year	1961	Year	1961	Year	1973	Year	1973	Year	1961	Year	1969	Year	1969	Year	1963	Year	1963	Year	
Avg.	High	89	Avg.	High	89	Avg.	High	90	Avg.	High	88	Avg.	High	88	Avg.	High	88	Avg.	High	87	Avg.	High	87
Highest	104	Highest	103	Highest	103	Highest	103	Highest	Highest	Highest	100	Highest	99	Highest	99	Highest	96	Highest	96	Highest	96	Highest	96
Year	1958	Year	1958	Year	1958	Year	1958	Year	1959	Year	1974	Year	1973	Year	1954;	Year	'73	Year	1954	Year	1954	Year	
<b>15</b>			<b>16</b>			<b>17</b>			<b>18</b>			<b>19</b>			<b>20</b>			<b>21</b>					
Avg.	Low	63	Avg.	Low	61	Avg.	Low	61	Avg.	Low	60	Avg.	Low	60	Avg.	Low	60	Avg.	Low	59	Avg.	Low	59
Lowest	54	Lowest	50	Lowest	52	Lowest	52	Lowest	52	Lowest	49	Lowest	49	Lowest	47	Lowest	53	Lowest	52	Lowest	52	Lowest	52
Year	1966	Year	1966	Year	1966	Year	1966	Year	1960	Year	1971	Year	1971	Year	1969;	Year	'71	Year	1969	Year	1969	Year	
Avg.	High	88	Avg.	High	87	Avg.	High	85	Avg.	High	86	Avg.	High	87	Avg.	High	86	Avg.	High	85	Avg.	High	85
Highest	96	Highest	101	Highest	101	Highest	102	Highest	Highest	Highest	99	Highest	99	Highest	99	Highest	99	Highest	96	Highest	96	Highest	96
Year	1954;	'56	Year	1959	Year	1959	Year	1959	Year	1959	Year	1959	Year	1965	Year	1965	Year	1965	Year	1965	Year	1965	Year
<b>22</b>			<b>23</b>			<b>24</b>			<b>25</b>			<b>26</b>			<b>27</b>			<b>28</b>					
Avg.	Low	59	Avg.	Low	60	Avg.	Low	59	Avg.	Low	57	Avg.	Low	56	Avg.	Low	56	Avg.	Low	57	Avg.	Low	57
Lowest	51	Lowest	52	Lowest	45	Lowest	45	Lowest	45	Lowest	44	Lowest	43	Lowest	43	Lowest	50	Lowest	51	Lowest	51	Lowest	51
Year	1957	Year	1957	Year	1957	Year	1957	Year	1961	Year	1975	Year	1975	Year	1975	Year	1975	Year	1954;	Year	1954;	Year	
Avg.	High	82	Avg.	High	80	Avg.	High	81	Avg.	High	95	Avg.	High	95	Record	Temperature	(°F.)	Rainfall	Snowfall	(in inches)	Monthly Avg	Monthly Max	
Highest	96	Highest	96	Highest	96	Highest	96	Highest	Highest	Highest	95	Highest	95	Highest	95	Maximum	105;5th,	'64;12th,	0.42	0	0	0	
Year	1965	Year	1965	Year	1965	Year	1965	Year	1965	Year	1965	Year	1965	Year	1971	Minimum	36;31st,	'71	3.78;1972	0	0	0	
<b>29</b>			<b>30</b>			<b>31</b>			<b>32</b>			<b>33</b>			<b>34</b>			<b>35</b>			<b>36</b>		
Avg.	Low	57	Avg.	Low	56	Avg.	Low	53	Avg.	Low	51	Avg.	Low	51	Avg.	Low	51	Avg.	Low	51	Avg.	Low	51
Lowest	43	Lowest	38	Lowest	38	Lowest	36	Lowest	36	Lowest	36	Lowest	36	Lowest	36	Avg. Rel. Humidity (%)	(35) %	Avg. Wind Speed (kts)	4	Avg. Wind Dir	W	Avg. Wind Dir	W
Year	1971	Year	1971	Year	1971	Year	1971	Year	1971	Year	1971	Year	1971	Year	1971	Prevailing	CLOUDY	6	Average Sky Cover	3/10	Average Sky Cover	3/10	

## YUMA PROVING GROUND, ARIZONA

### 1954-DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE-1975 MONTHLY SUMMARY OF AVERAGE CLIMATOLOGICAL DATA. WITH RAINFALL EXTREMES

NOVEMBER MONTHLY SUMMARY OF AVERAGE CLIMATOLOGICAL DATA, WITH RAINFALL EXTREMES											
Avg. High 81 Highest 94 YEAR 1962; 66	Avg. High 80 Highest 90 YEAR 1962	Avg. High 82 Highest 94 YEAR 1962	Avg. High 82 Highest 92 YEAR 1962; '65; '75	Avg. High 82 Highest 91 YEAR 1975	Avg. High 82 Highest 89 YEAR 1965; '75	Avg. High 82 Highest 89 YEAR 1956	Avg. High 82 Highest 90 YEAR 1956	Avg. High 82 Highest 89 YEAR 1956	Avg. High 82 Highest 89 YEAR 1956	Avg. High 82 Highest 89 YEAR 1956	Avg. High 82 Highest 88 YEAR 1956
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
Avg. Low 54 Lowest 41 YEAR 1972	Avg. Low 53 Lowest 42 YEAR 1956	Avg. Low 53 Lowest 42 YEAR 1961	Avg. Low 53 Lowest 40 YEAR 1956	Avg. Low 53 Lowest 41 YEAR 1956	Avg. Low 53 Lowest 41 YEAR 1956	Avg. Low 53 Lowest 41 YEAR 1956	Avg. Low 50 Lowest 40 YEAR 1966	Avg. Low 51 Lowest 42 YEAR 1966	Avg. Low 51 Lowest 42 YEAR 1958	Avg. Low 52 Lowest 42 YEAR 1958	Avg. Low 52 Lowest 42 YEAR 1965
Avg. High 81 Highest 90 YEAR 1956; '62	Avg. High 81 Highest 92 YEAR 1956	Avg. High 82 Highest 90 YEAR 1973	Avg. High 80 Highest 92 YEAR 1973	Avg. High 80 Highest 92 YEAR 1973	Avg. High 79 Highest 93 YEAR 1973	Avg. High 79 Highest 93 YEAR 1967	Avg. High 72 Highest 84 YEAR 1967	Avg. High 72 Highest 86 YEAR 1967	Avg. High 73 Highest 86 YEAR 1967	Avg. High 74 Highest 83 YEAR 1966	Avg. High 74 Highest 83 YEAR 1954
<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>
Avg. Low 52 Lowest 47 YEAR 1974	Avg. Low 51 Lowest 43 YEAR 1955	Avg. Low 50 Lowest 40 YEAR 1966	Avg. Low 50 Lowest 40 YEAR 1966	Avg. Low 47 Lowest 31 YEAR 1958	Avg. Low 46 Lowest 35 YEAR 1961; '64	Avg. Low 46 Lowest 35 YEAR 1958	Avg. Low 46 Lowest 35 YEAR 1954	Avg. Low 47 Lowest 33 YEAR 1956	Avg. Low 46 Lowest 33 YEAR 1954	Avg. Low 48 Lowest 35 YEAR 1966	Avg. Low 48 Lowest 39 YEAR 1966
Avg. High 74 Highest 87 YEAR 1967	Avg. High 72 Highest 86 YEAR 1967	Avg. High 73 Highest 84 YEAR 1967	Avg. High 72 Highest 84 YEAR 1967	Avg. High 76 Highest 86 YEAR 1954; '59	Avg. High 75 Highest 86 YEAR 1954	Avg. High 74 Highest 85 YEAR 1954	Avg. Low 48 Lowest 38 YEAR 1954	Avg. Low 48 Lowest 39 YEAR 1954	Avg. Low 48 Lowest 39 YEAR 1954	Avg. Low 48 Lowest 35 YEAR 1973	Avg. Low 46 Lowest 35 YEAR 1973
<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>								
Avg. Low 49 Lowest 40 YEAR 1964	Avg. Low 49 Lowest 35 YEAR 1964	Avg. Low 47 Lowest 31 YEAR 1958	Avg. Low 46 Lowest 31 YEAR 1958	RECORD TEMPERATURES (°F.)							
Avg. High 73 Highest 85 YEAR 1954	Avg. High 74 Highest 86 YEAR 1954	Avg. High 76 Highest 86 YEAR 1954; '59	Avg. High 75 Highest 86 YEAR 1954	MAXIMUM 94; 1st & 3d, '62; '66	MINIMUM 31; 17th, '1958	0.22	0.22	0.22	0.22	0.22	0.22
<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>						
Avg. Low 47 Lowest 40 YEAR 1964	Avg. Low 47 Lowest 39 YEAR 1955; '61	Avg. Low 46 Lowest 36 YEAR 1955	Avg. Low 46 Lowest 36 YEAR 1966	Rainfall (in inches)	Rainfall (in inches)	MONTHLY AVG					
Avg. High 72 Highest 82 YEAR 1966	Avg. High 70 Highest 80 YEAR 1966	Avg. High 70 Highest 80 YEAR 1966	Avg. High 70 Highest 80 YEAR 1966	MAX 76 AVG MIN 49	MAX 76 AVG MIN 49	0.73; 1969	0.73; 1969	0.73; 1969	0.73; 1969	0.73; 1969	0.73; 1969
<b>30</b>	<b>31</b>					Avg Rel. Humidity (%)					
Avg. Low 47 Lowest 41 YEAR 1959	Avg. Low 46 Lowest 38 YEAR 1975	Avg. Low 46 Lowest 38 YEAR 1975	Avg. Low 46 Lowest 38 YEAR 1975	4	4	37	37	37	37	37	37
						Precip. (inches)					
						Wind Speed (Kts.)					
						Wind Dir.					
						Cloudy 3					
						Average Sky Cover					
						3/10	3/10	3/10	3/10	3/10	3/10

**YUMA PROVING GROUND, ARIZONA**  
**1954-DAILY TEMPERATURE MEANS AND EXTREMES, WITH YEAR OF OCCURRENCE-1975**  
**MONTHLY SUMMARY OF AVERAGE CLIMATOLOGICAL DATA, WITH RAINFALL EXTREMES**

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